

HAND BOOK  
*on*  
Gas Ranges  
*for*  
Architects and Builders



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# HAND BOOK

*on*

## Gas Ranges

*for*

# Architects and Builders



NEW PROCESS STOVE CO. DIV.	Cleveland, Ohio
QUICK MEAL STOVE CO. DIV.	St. Louis, Mo.
RELIABLE STOVE CO. DIV.	Cleveland, Ohio
GEORGE M. CLARK & CO. DIV.	Chicago, Ill.
DANGLER STOVE CO. DIV.	Cleveland, Ohio
NATIONAL STOVE CO. DIV.	Lorain, Ohio

AMERICAN STOVE COMPANY  
St. Louis, Mo.

*Copyright 1925  
American Stove Company*

# An Introduction to a Subject of Great Importance to Architects and Builders

HE Lorain Oven Heat Regulator is the first perfect application of thermostatic control of heat to the oven of the domestic gas range. "Lorain" was invented in the Research Laboratories of American Stove Company, and is sold only as an integral part of gas ranges manufactured by the several divisions of American Stove Company, the world's largest manufacturer of gas ranges.

Lorain has been made and marketed successfully for over ten years. It is the **original** oven heat regulator. The Lorain Oven Heat Regulator is made and guaranteed by the same stove company that manufactures the stoves of which it is a part. It is the only regulator universally known to the American housewife. This is true because of the extensive National Advertising which has been carried on uninterruptedly for the past six years. The name "Lorain" is carried in over 90,000,000 advertisements yearly.

Thus, housewives the country over are thoroughly educated and sold on the advantages of the Lorain Oven Heat Regulator. They know that Lorain insures perfect results with everything cooked or baked in the oven, that it permits of the cooking of a Whole Meal while the housewife is miles away enjoying herself, that it enables her to do her Canning in the oven — quickly, easily, cheaply, and with unequalled results.

By making it possible for the housewife to regulate and control the oven temperature **exactly**, the Lorain Oven Heat Regulator has made the art of "good cooking" easily acquired and more exact, rather than an art mastered only after years of discouraging failures. For this reason, more than sixteen hundred schools and colleges are Today using Lorain-equipped Gas Ranges to teach students the science of cooking.

The Lorain Oven Heat Regulator has been approved by every recognized test-kitchen in America, the New York Testing and Keeping Institute, the Testing

New York Tribune Institute, Modern School of Cookery and the Testing House of Today's Housewife.

Moreover, with few exceptions, manufacturers of nationally-known food products use Lorain-equipped gas ranges in their Experimental Kitchens and now include Time and Temperature in their nationally-advertised recipes.

Satisfied tenants are the greatest asset the investment builder can have and nothing can be placed in his apartments which will go farther to bring about "tenant satisfaction" than the installation of a Lorain-equipped Range.

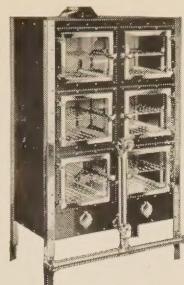
Satisfied tenants stay "put" and every investment-builder knows what this means to him in actual dollars and cents.

Once a woman has lived in a Lorain-equipped apartment she knows Lorain Service and will hesitate, if not stop, at renting another apartment where the kitchen does not have a Lorain-equipped Gas Range. Families are continually moving from one apartment to another and Lorain-equipped kitchens are becoming more of a factor each year to hold tenants.

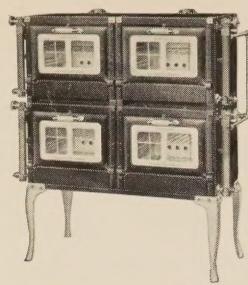
*Lorain-equipped apartments have a higher rental value, rent easier, and stay rented longer.*

From a rental standpoint the small additional cost for Lorain equipment is the very best of investments as shown in the foregoing, but aside from this fact the additional cost will more than be made up in the savings to the investment-builder in his cost of maintenance through the elimination of repairs so frequently needed on most stoves.

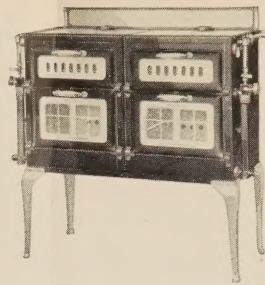
# HANDBOOK on GAS RANGES



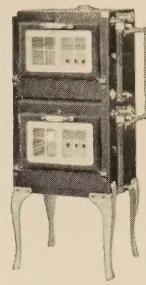
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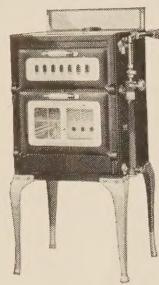
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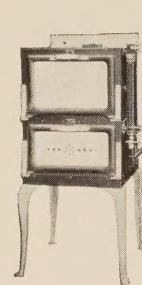
DIRECT ACTION No. 30



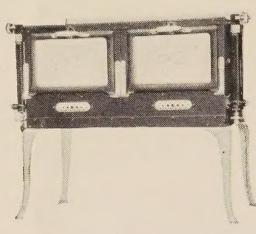
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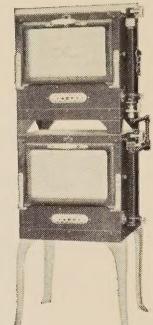
DIRECT ACTION No. 15



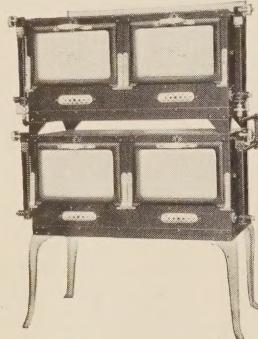
QUICK MEAL No. 111



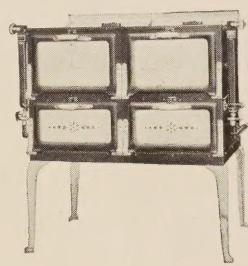
QUICK MEAL No. 102



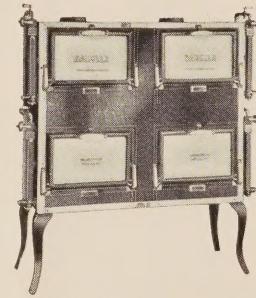
QUICK MEAL No. 103



QUICK MEAL No. 104



QUICK MEAL No. 122



Dangler No. 2004



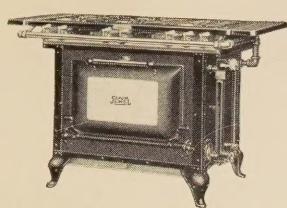
RELIABLE No. 950

## Special Lorain-equipped Gas Ovens for Schools and Laboratories

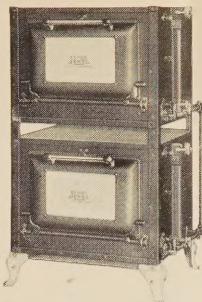
The above ovens are especially designed for experimental work and instruction in oven cookery. Any Lorain-equipped gas range is suitable for the same purpose if the cooking-top is required.

TABLE OF DIMENSIONS

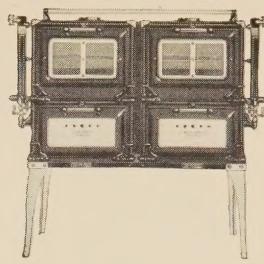
Stove No.	BROILER			OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
60				9 $\frac{1}{2}$ "	14"	11"	52"	16"	31"
40				12"	18"	18"	58"	25"	55 $\frac{1}{2}$ "
30	7 $\frac{1}{2}$ "	18"	18"	12"	18"	18"	53 $\frac{1}{2}$ "	25"	55 $\frac{1}{2}$ "
20				12"	18"	18"	58"	25"	28"
15	7 $\frac{1}{2}$ "	18"	18"	12"	18"	18"	53 $\frac{1}{2}$ "	25"	28 $\frac{1}{2}$ "
111	9"	21 $\frac{1}{2}$ "	18"	12"	21 $\frac{1}{2}$ "	18"	52"	25"	27"
102				12"	21 $\frac{1}{2}$ "	18"	44"	25"	52"
103				12"	21 $\frac{1}{2}$ "	18"	66"	25"	27"
104				12"	21 $\frac{1}{2}$ "	18"	66"	25"	52"
122	9"	21 $\frac{1}{2}$ "	18"	12"	21 $\frac{1}{2}$ "	18"	52"	25"	52"
2004				12"	18"	18 $\frac{1}{2}$ "	60"	24"	58"
950				14"	18"	18 $\frac{1}{2}$ "	51 $\frac{1}{2}$ "	24 $\frac{3}{4}$ "	47 $\frac{1}{2}$ "



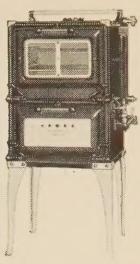
CLARK JEWEL No. A-456



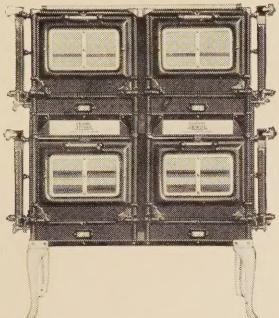
CLARK JEWEL No. A2-456



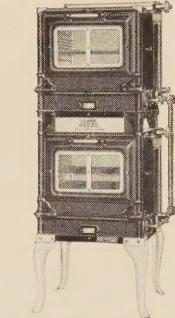
CLARK JEWEL No. A-238



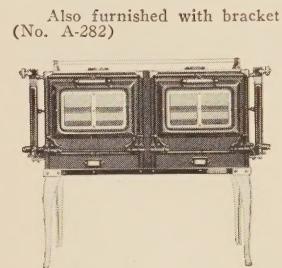
CLARK JEWEL No. A-138



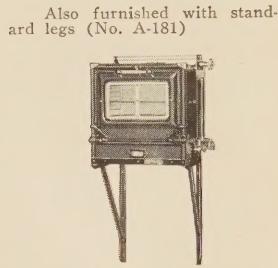
CLARK JEWEL No. A-284



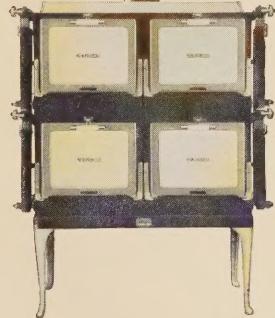
CLARK JEWEL No. A-182



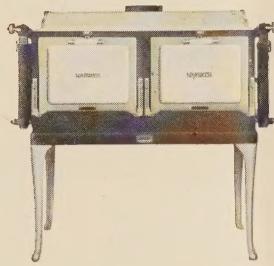
CLARK JEWEL No. A-282



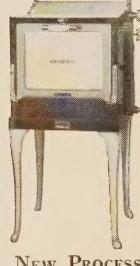
CLARK JEWEL No. A-181  
ON BRACKET



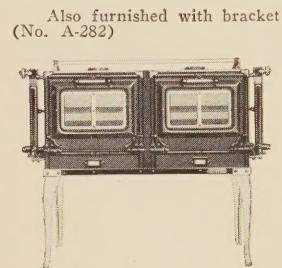
NEW PROCESS No. 118-04  
SEMI-ENAMEL



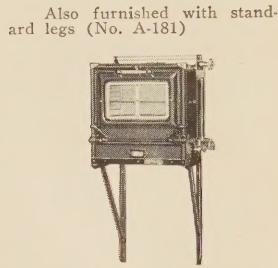
NEW PROCESS No. 118-02  
SEMI-ENAMEL



NEW PROCESS  
No. 118-01  
SEMI-ENAMEL



CLARK JEWEL No. A-282



CLARK JEWEL No. A-181  
ON BRACKET

#### NOTICE

Any Lorain equipped stove may be used in schools, the special Domestic Science Ovens not always being used.

All American Stove Company ranges and ovens, of which there is a large variety, may be used in schools, clubs, cafeterias, bakeries, and places where the utmost precision and modern equipment are required.

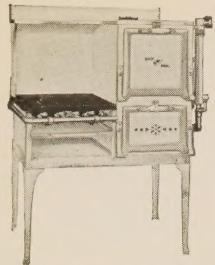
#### Special Lorain-equipped Gas Ovens for Schools and Laboratories

The above ovens are especially designed for experimental work and instruction in oven cookery. Any Lorain-equipped gas range is suitable for the same purpose if the cooking-top is required.

TABLE OF DIMENSIONS

Stove No.	BROILER			OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
A-456				14"	22"	22½"	32½"	33"	49"
A2-456				14"	22"	22½"	52½"	30"	36"
A-238	10"	20"	18½"	14"	20"	18½"	52½"	26"	56"
A-138	10"	20"	18½"	14"	20"	18½"	52½"	26"	28"
A-284				14"	20"	18½"	64"	29½"	56"
A-182				14"	20"	18½"	64"	29½"	28"
A-282				14"	20"	18½"	44"	26"	56"
118-04				13½"	18½"	18½"	65"	28½"	53½"
118-02				13½"	18½"	18½"	49½"	26½"	53½"
118-01				13½"	18½"	18½"	49½"	26½"	27"
A-181 on brackets				14"	20"	18½"	24"	26"	28"

# HANDBOOK on GAS RANGES



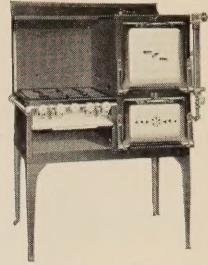
QUICK MEAL No. 9-604



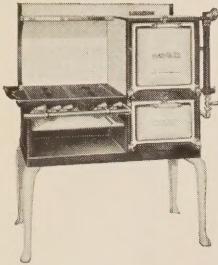
QUICK MEAL No. 1787-W



QUICK MEAL No. 1-414



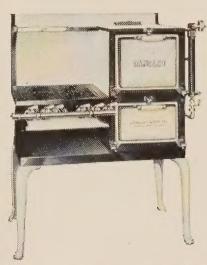
QUICK MEAL No. 8-104



Dangler No. 2470-XF



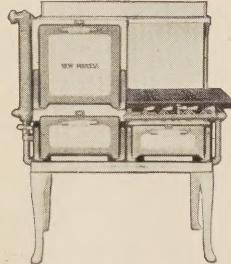
Dangler No. 2471-XF



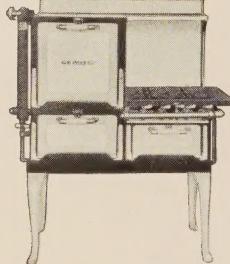
Dangler No. 2477-XF



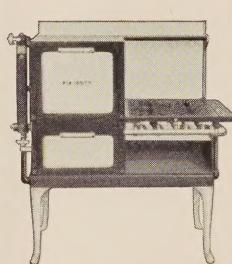
Dangler No. 2475-EF



NEW PROCESS No. 4-36  
ALL-ENAMEL



NEW PROCESS No. 114-36  
SEMI-ENAMEL



NEW PROCESS No. 139-16  
SEMI-ENAMEL



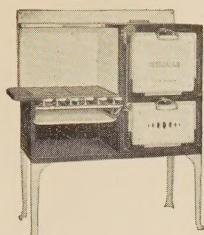
NEW PROCESS No. 18-81

## Special Lorain-equipped Gas Stoves for Small Kitchens

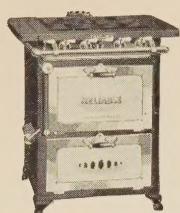
All cabinet ranges can be made with left or right hand ovens

TABLE OF DIMENSIONS

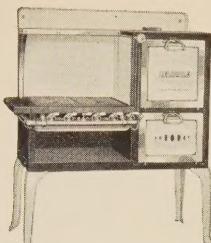
Stove No.	COOKING TOP			BROILER			OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
9-604	32½"	23"	19¾"	9½"	21"	14"	14"	21"	14"	54"	28½"	44"
1787-W	36"	25½"	25"	9"	18"	18"	12"	18"	18"	36"	26"	36½"
1-414	32½"	21"	20"	9"	20"	14"	14"	20"	14"	52"	27"	47"
8-104	32½"	23"	19¾"	9½"	21"	14"	14"	21"	14"	54"	28½"	44"
2470-XF	31½"	20½"	22"	8"	19"	14"	14"	19"	14"	51"	27½"	47"
2471-XF	32"	20"	21"	8"	19"	14"	14"	19"	14"	51"	26"	48"
2477-XF	31½"	20½"	19½"	8"	19"	14"	12"	19"	14"	46"	26"	41"
2475-EF	33¼"	22"	20½"	10"	19"	14"	12"	19"	14"	50"	26"	48"
4-36	32"	21½"	20"	8½"	18½"	14½"	14½"	18½"	14½"	52"	27½"	44"
114-36	32"	21½"	20"	8½"	18½"	14½"	14½"	18½"	14½"	52"	27½"	44"
139-16	32"	22"	22"	8½"	18"	16½"	14½"	18"	16½"	50½"	27½"	45½"
18-81	32½"	23¼"	36"				12"	18½"	18½"	34"	29"	36"



RELIABLE No. 5916



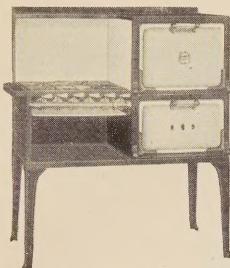
RELIABLE No. 1314



RELIABLE No. 5481



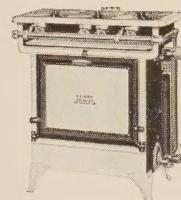
RELIABLE No. 1124



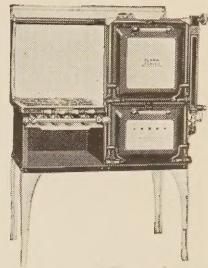
CLARK JEWEL No. G-160



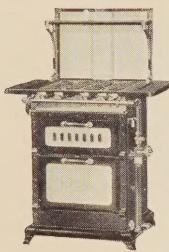
CLARK JEWEL No. R-260-X



CLARK JEWEL No. A-234



CLARK JEWEL No. A-3446



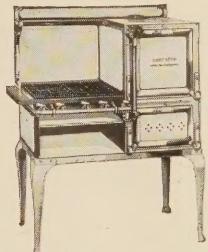
DIRECT ACTION No. 130-HR  
WITH BACK SHELF



DIRECT ACTION No. 214-ER-HR



DIRECT ACTION No. 314-R-HR



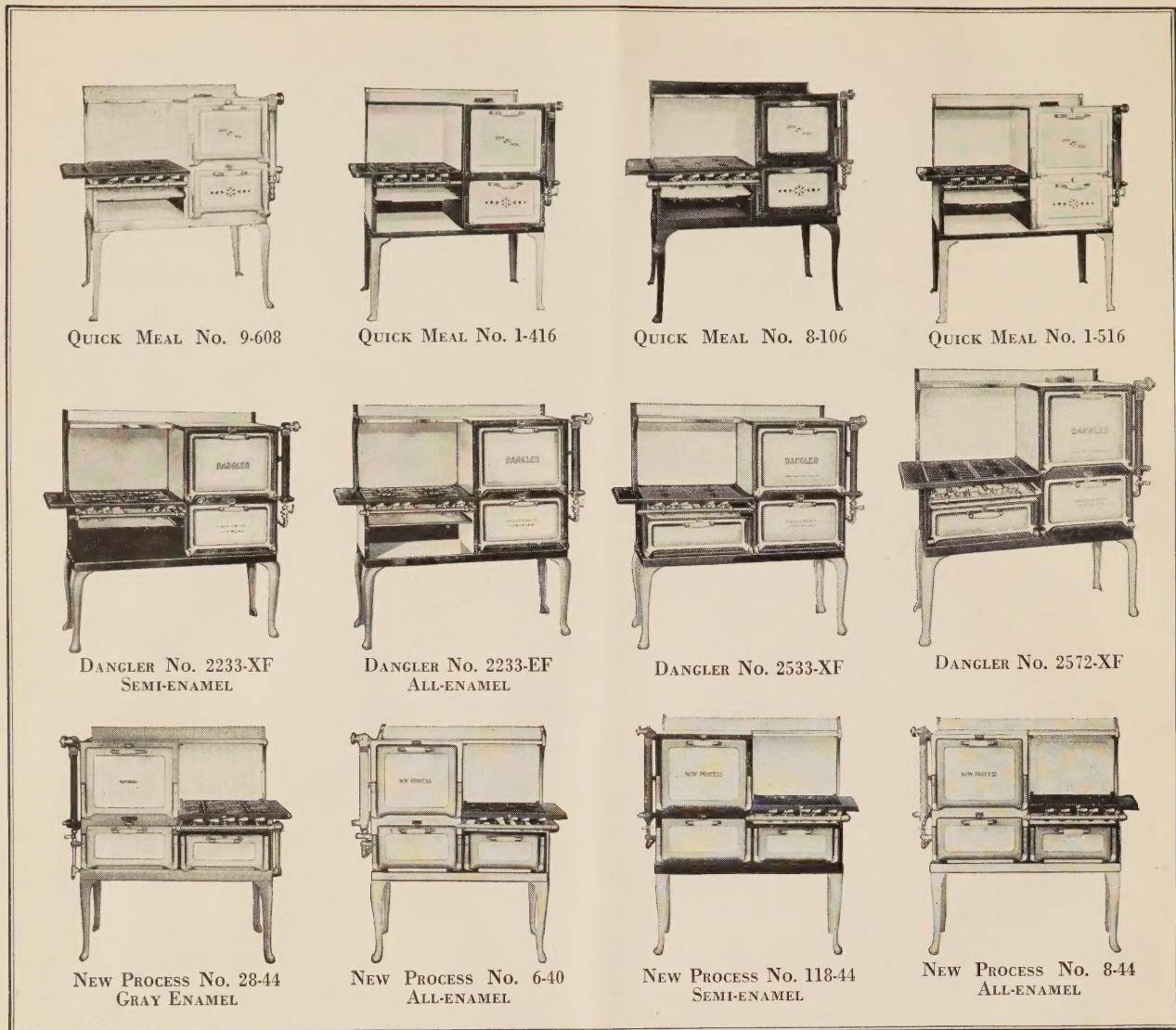
DIRECT ACTION No. 214-AR-HR

### Special Lorain-equipped Gas Ranges for Small Kitchens

All cabinet ranges can be made with left or right hand ovens

TABLE OF DIMENSIONS

Stove No.	COOKING TOP			BROILER			OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
5916	33"	19"	23 $\frac{3}{8}$ "	10"	18"	16"	14"	18"	16"	52 $\frac{1}{4}$ "	25"	43 $\frac{3}{4}$ "
1314	34 $\frac{1}{8}$ "	21 $\frac{3}{4}$ "	29 $\frac{7}{8}$ "	9 $\frac{1}{8}$ "	18"	18 $\frac{1}{2}$ "	11"	18"	18 $\frac{1}{2}$ "	34 $\frac{1}{8}$ "	29"	29 $\frac{7}{8}$ "
5481	30 $\frac{3}{4}$ "	20 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "	10"	18"	14"	14"	18"	14"	51 $\frac{3}{4}$ "	24 $\frac{3}{4}$ "	45"
1124	35"	21 $\frac{3}{4}$ "	29 $\frac{7}{8}$ "				11"	18"	18 $\frac{1}{2}$ "	35"	29"	29 $\frac{7}{8}$ "
G-160	32"	19 $\frac{1}{8}$ "	20 $\frac{1}{4}$ "	9 $\frac{1}{4}$ "	18 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "	12"	18 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "	47 $\frac{1}{4}$ "	23 $\frac{1}{2}$ "	43"
R-260X	32"	19 $\frac{1}{8}$ "	20 $\frac{1}{4}$ "	9 $\frac{1}{4}$ "	18 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "	12"	18 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "	47 $\frac{1}{4}$ "	24"	48"
A-234	34"	13 $\frac{1}{2}$ "	28"				14"	13"	18 $\frac{1}{2}$ "	34"	19 $\frac{1}{2}$ "	30 $\frac{1}{2}$ "
A-3446	32"	23"	17 $\frac{1}{2}$ "	10"	20"	14 $\frac{1}{2}$ "	14"	20"	14 $\frac{1}{2}$ "	52"	29"	41"
130-HR-Shelf	36"	24"	36"	8 $\frac{1}{2}$ "	18"	18"	12"	18"	18"	54 $\frac{1}{2}$ "	24"	36"
214-ER-HR	32 $\frac{1}{2}$ "	21"	24"	8 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	14"	14"	19 $\frac{1}{2}$ "	14"	51"	26"	42"
314-R-HR	32 $\frac{1}{2}$ "	21"	24"	8 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	14"	14"	19 $\frac{1}{2}$ "	14"	55"	26"	46 $\frac{1}{2}$ "
214-AR-HR	32 $\frac{1}{2}$ "	21"	24"	8 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	14"	14"	19 $\frac{1}{2}$ "	14"	51"	26"	42"

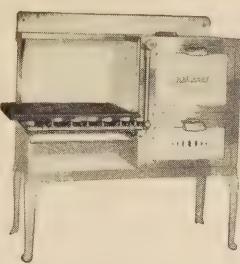


**Special Lorain-equipped Gas Stoves for Medium Kitchens**

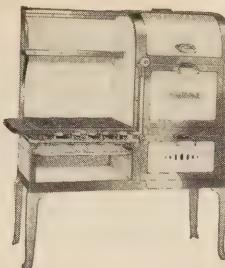
All cabinet ranges can be made with left or right hand ovens

TABLE OF DIMENSIONS

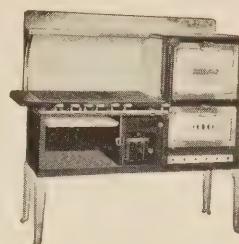
Stove No.	COOKING TOP			BROILER			OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
9-608	32"	25"	23"	9"	21"	18"	12"	21"	18"	51½"	28¾"	55½"
1-416	32½"	21"	20"	9"	20"	16"	14"	20"	16"	52"	27"	49"
8-106	32"	25"	23"	9"	21"	16"	12"	21"	16"	50½"	28¾"	49"
1-516	32½"	21"	20"	9"	20"	16"	14"	20"	16"	52"	27"	49"
2233-XF	33"	21"	24½"	10"	19"	18½"	14"	19"	18½"	52"	27½"	55"
2233-EF	33"	21"	24½"	10"	19"	18½"	14"	19"	18½"	52"	27½"	55"
2533-XF	33"	21"	24½"	10"	19"	18½"	14"	19"	18½"	52"	27½"	55"
2572-XF	31½"	20½"	22"	8½"	19"	16"	14"	19"	16"	51"	27½"	49"
28-44	33"	21½"	24"	8½"	18½"	18½"	14½"	18½"	18½"	52"	27½"	51½"
6-40	33"	21½"	22"	8½"	18½"	16½"	14½"	18½"	16½"	52"	27½"	47"
118-44	33"	21½"	24"	8½"	18½"	18½"	14½"	18½"	18½"	52"	27½"	51½"
8-44	33"	21½"	24"	8½"	18½"	18½"	14½"	18½"	18½"	52"	27½"	51½"



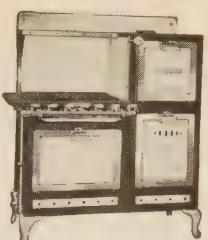
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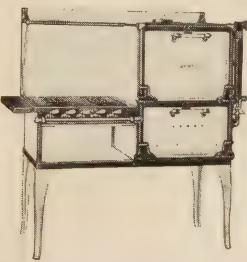
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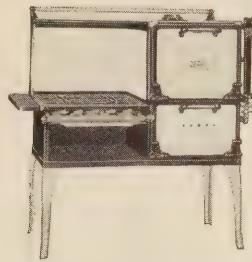
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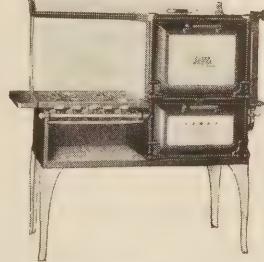
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CLARK JEWEL No. A-638



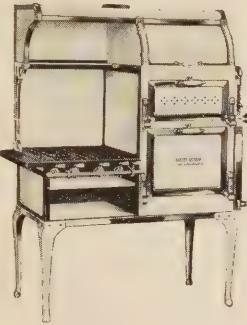
CLARK JEWEL No. A-336-S



CLARK JEWEL No. A-338



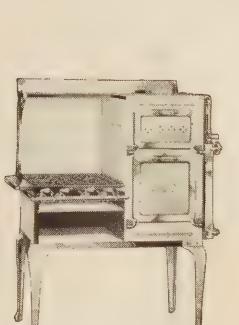
CLARK JEWEL No. A-316  
LEFT OVEN



DIRECT ACTION  
No. 328-AR-HR-CANOPY



DIRECT ACTION No. 316-XR-HR



DIRECT ACTION No. 314-AR-HR



DIRECT ACTION No. 226-ER-HR

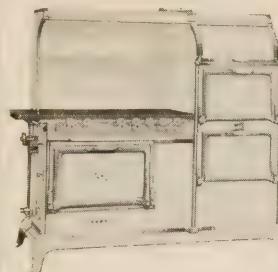
### Special Lorain-equipped Gas Ranges for Medium Kitchens

All cabinet ranges can be made with left or right hand ovens

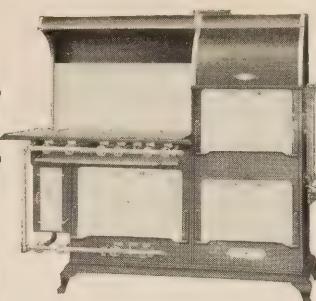
TABLE OF DIMENSIONS

Stove No.	COOKING TOP			BROILER			OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
6381	30 $\frac{3}{4}$ "	20 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "	10"	18"	18 $\frac{1}{2}$ "	14"	18"	18 $\frac{1}{2}$ "	51 $\frac{1}{4}$ "	24 $\frac{3}{4}$ "	49 $\frac{1}{2}$ "
6382	30 $\frac{3}{4}$ "	20 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "	10"	18"	18 $\frac{1}{2}$ "	14"	18"	18 $\frac{1}{2}$ "	57 $\frac{1}{4}$ "	24 $\frac{3}{4}$ "	50 $\frac{1}{4}$ "
5882	34 $\frac{1}{2}$ "	20 $\frac{1}{2}$ "	34 $\frac{3}{4}$ "	10"	18"	18 $\frac{1}{2}$ "	14"	18"	18 $\frac{1}{2}$ "	55 $\frac{1}{2}$ "	27 $\frac{1}{4}$ "	58 $\frac{3}{4}$ "
5304	34 $\frac{1}{4}$ "	20 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "	17 $\frac{1}{2}$ "	18"	14"	14"	18"	20"	55"	24 $\frac{1}{2}$ "	47"
A-638	32"	23"	22 $\frac{1}{2}$ "	10"	20"	18 $\frac{1}{2}$ "	14"	20"	18 $\frac{1}{2}$ "	52"	29"	53 $\frac{1}{2}$ "
A-336-S	32"	23"	22 $\frac{1}{2}$ "	10"	20"	16 $\frac{1}{2}$ "	14"	20"	16 $\frac{1}{2}$ "	52"	29"	51 $\frac{1}{2}$ "
A-338	32"	23"	22 $\frac{1}{2}$ "	10"	20"	18 $\frac{1}{2}$ "	14"	20"	18 $\frac{1}{2}$ "	52"	29"	53 $\frac{1}{2}$ "
A-316	32"	23"	22 $\frac{1}{2}$ "	10"	20"	16 $\frac{1}{2}$ "	14"	20"	16 $\frac{1}{2}$ "	52"	29"	51 $\frac{1}{2}$ "
328-AH-R- Canopy	32 $\frac{1}{2}$ "	21"	24"	8 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	18"	14"	19 $\frac{1}{2}$ "	18"	63"	26"	50 $\frac{1}{2}$ "
316-XR-HR	32 $\frac{1}{2}$ "	21"	24"	8 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	16"	14"	19 $\frac{1}{2}$ "	16"	55"	26"	48 $\frac{1}{2}$ "
314-AR-HR	32 $\frac{1}{2}$ "	21"	24"	8 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	14"	14"	19 $\frac{1}{2}$ "	14"	55"	26"	46 $\frac{1}{2}$ "
226-ER-HR	32 $\frac{1}{2}$ "	21"	24"	8 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	16"	14"	19 $\frac{1}{2}$ "	16"	59"	26"	44"

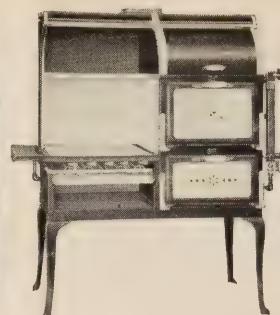
# HANDBOOK on GAS RANGES



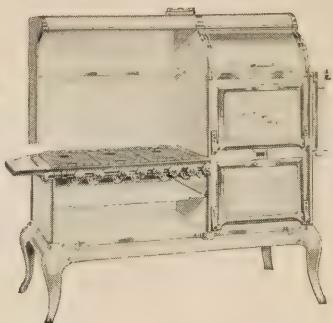
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QUICK MEAL No. 8-528



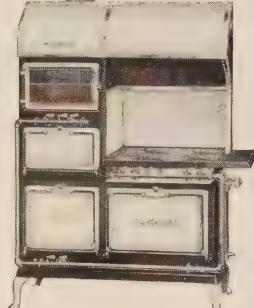
QUICK MEAL No. 8-218



QUICK MEAL No. 4-687-W



DANGLER No. 2209-EF



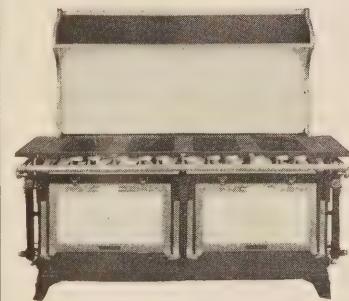
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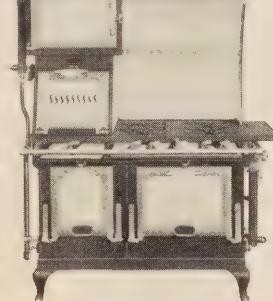
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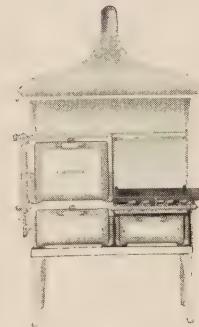
DANGLER No. 2208-F



NEW PROCESS No. 24-97  
WITH BACK SHELF



NEW PROCESS No. 18-97-16



NEW PROCESS No. 8-44  
ALL ENAMEL WITH DOME HOOD



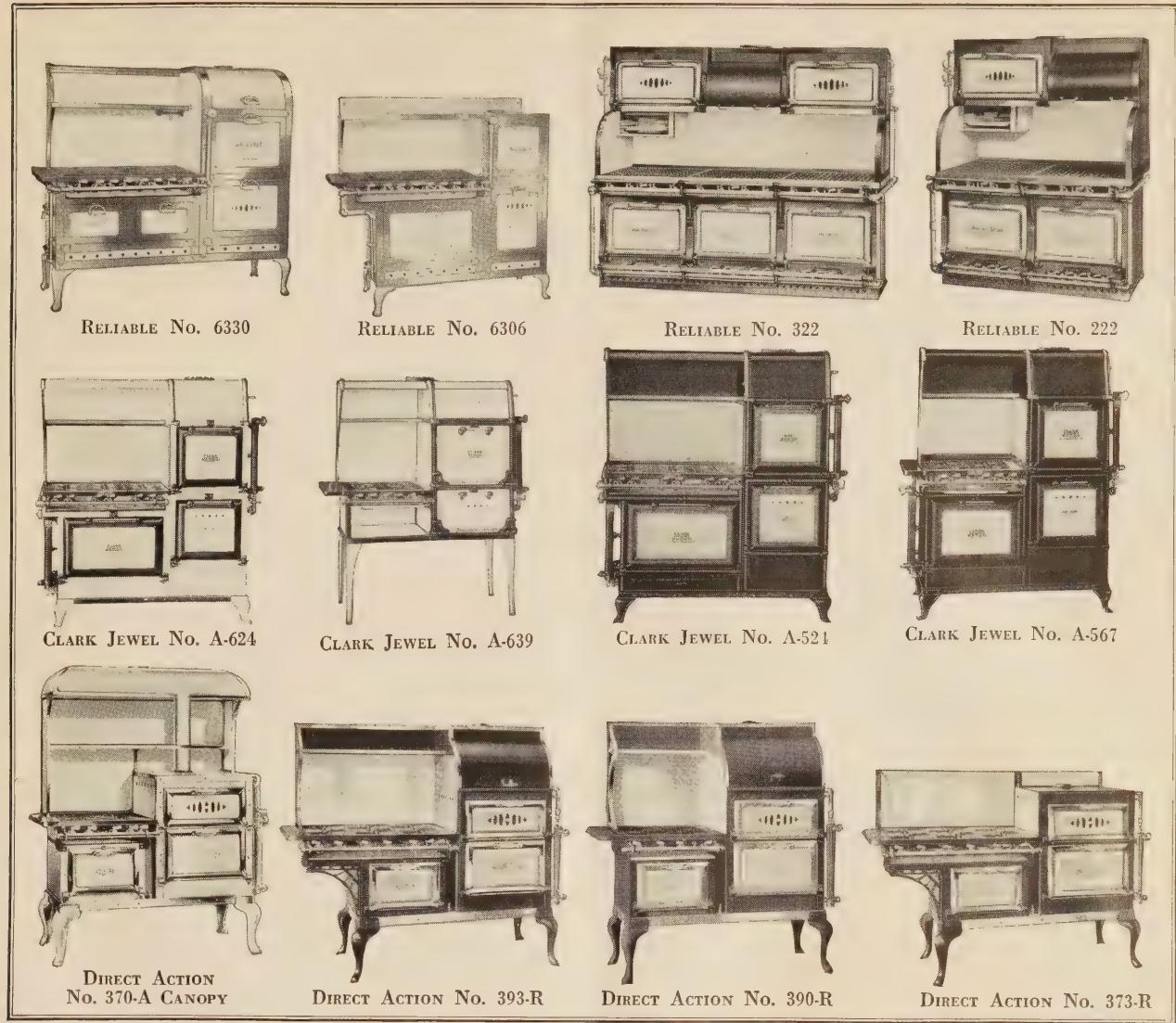
NEW PROCESS No. 24-33-16

## Special Lorain-equipped Gas Stoves for Large Kitchens

All cabinet ranges can be made with left or right hand ovens

TABLE OF DIMENSIONS

Stove No.	COOKING TOP			BROILER			LARGE OVEN			SMALL OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
2-218-W	36"	22½"	36"	12"	21"	18"	14"	21"	22"	12"	21"	18"	63"	29½"	67"
8-528	33½"	22"	36"	12"	18"	18"	14"	18"	22"	12"	18"	18"	57"	29½"	71"
8-218	32"	25"	23"	9"	21"	18"	12"	21"	18"				63"	28¾"	56"
4-687-W	30"	22½"	36"	10"	21"	22"	14"	21"	22"				64"	24¾"	73"
2209-EF	34"	24"	27"	9"	16½"	18½"	14"	18½"	22"	10"	18½"	16½"	57"	29"	50"
2205-WF	34"	24"	27"	9"	16½"	18½"	14"	18½"	22"	10"	18½"	16½"	70"	29"	50"
2203-WF	34"	24"	49"	9"	16½"	18½"	14"	18½"	22"	10"	18½"	16½"	70"	29"	72"
2208-F	34"	24"	49"	14"	16½"	18½"	14"	18½"	22"				68"	29"	54"
24-97	30"	26"	67½"				12¾"	18½"	24½"				58½"	33½"	69"
8-44	33"	21½"	24"	8½"	18½"	18½"	14½"	18½"	18½"				80"	27½"	51½"
18-97-16	32½"	25"	32½"	12"	20½"	14"	12"	18½"	18½"	11"	18½"	16½"	63"	32½"	54½"
24-33-16	35"	25"	46½"	12"	20½"	14"	12¾"	18½"	24½"	11"	18½"	16½"	66"	32½"	67½"



**Special Lorain-equipped Gas Stoves for Large Kitchens**

All cabinet ranges can be made with left or right hand ovens

TABLE OF DIMENSIONS

Stove No.	COOKING TOP			BROILER			LARGE OVEN			SMALL OVEN			RANGE		
	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width	Height	Depth	Width
6330	31 $\frac{3}{4}$ "	20 $\frac{1}{2}$ "	37 $\frac{3}{4}$ "	14"	18"	20"	14"	18"	20"	8 $\frac{3}{4}$ "	18"	14"	58"	25"	63 $\frac{3}{4}$ "
6306	34 $\frac{1}{4}$ "	20 $\frac{1}{2}$ "	37 $\frac{3}{4}$ "	17 $\frac{1}{2}$ "	18"	14"	14"	18"	24"	14"	18"	14"	55"	24 $\frac{1}{2}$ "	58"
322	30 $\frac{1}{4}$ "	26"	73 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	14 $\frac{1}{4}$ "	23 $\frac{1}{2}$ "	14"	20"	22"				66"	36"	80 $\frac{1}{2}$ "
222	30 $\frac{1}{4}$ "	26"	49"	11 $\frac{1}{2}$ "	14 $\frac{1}{2}$ "	23 $\frac{1}{2}$ "	14"	20"	22"				66"	36"	55 $\frac{1}{2}$ "
A-624	32 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	31"	14"	19 $\frac{1}{2}$ "	16"	14"	19 $\frac{1}{2}$ "	24"	14"	19 $\frac{1}{2}$ "	16"	60"	28"	57 $\frac{1}{2}$ "
A-639	32"	23"	22 $\frac{1}{2}$ "	10"	20"	18 $\frac{1}{2}$ "	14"	20"	18 $\frac{1}{2}$ "				61 $\frac{1}{2}$ "	29"	53 $\frac{1}{2}$ "
A-524	32 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	31"	14"	19 $\frac{1}{2}$ "	16"	14"	19 $\frac{1}{2}$ "	24"	14"	19 $\frac{1}{2}$ "	16"	60"	28"	57 $\frac{1}{2}$ "
A-567	32 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	24"	14"	19 $\frac{1}{2}$ "	16"	14"	19 $\frac{1}{2}$ "	20"	14"	19 $\frac{1}{2}$ "	16"	60"	28"	53"
370-A Canopy	32 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	29 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	18"	20"	12"	18"	20"	10"	17"	16"	62"	26"	57"
393-R	32 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	39 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	18"	20"	12"	18"	20"	10"	17"	16"	57"	26"	67"
390-R	32 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	29 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	18"	20"	12"	18"	20"	10"	17"	16"	57"	26"	57"
373-R	32 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "	39 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	18"	20"	12"	18"	20"	10"	17"	16"	47"	26"	67"

# Buildings Rent Easily Where Proper Attention Is Given to Gas Piping and Flue Outlets

(The following article is reprinted by the courtesy of the American Gas Association)

## Gas in the Modern Building

**Necessity for Piping**—The modern building most nearly approaches its point of maximum efficiency and maximum earning power when it presents for the use of its occupants the most complete facilities available in these modern times. To be **complete**, it must be adequately piped for gas.

Manufactured gas, the use of which is now so general as to be almost universal, possesses many advantages as a source of energy. From the nature of its process of manufacture, storage and distribution, its continuity of supply is absolutely reliable. Gas provides an uninterrupted service—flexible in demand and uniform in quality.

Its use goes a long way toward eliminating the costly and unsanitary smoke nuisance in our cities and towns as well as conserving our coal resources. Its use means a saving of time, through increased speed in actual operation, and the ability to secure uniform and more accurate control either manually or automatically. It saves space, a tremendous advantage in modern building operations, since it eliminates the storage space required for other fuels and the space necessary for the storage of ashes, containers, etc. It saves labor (handling solid fuels, ashes, etc.), due to its peculiar adaptability to automatic control and it also assures a more uniform product.

From practical experience, gas service is essential in the modern building. In the home it has long been a necessity not only for cooking, lighting, and water heating, but also for auxiliary and, more and more, complete heating from central heating plants. It is by no means unusual but rather the common experience to have prospective tenants of mercantile buildings demand this gas service in the premises which they are to occupy. This has, in fact, increased from year to year as both the uses of gas have multiplied and as the custom of housing light manufacturing concerns on the upper floors of mercantile buildings has increased. Now it is practically a universal demand for this service which, in a great number of cases, becomes a determining factor in the leasing of building space. Even in the office building, the practice of doctors and dentists, jewelers, chemists and small laboratories, restaurants and clubs occupying space has made gas service a positive necessity in the equipment of the building.

In addition, modern building principles call for the most permanent structures, so permanent that it is undeniable that they will outlast by many years the present generation. Due to this long life, the character of the occupancy and the uses to which the premises are put may change many times from those for which they were originally intended. Recent years have not only seen this condition but have seen complete changes of whole

neighborhoods carrying with them a change in character of occupancy of every building in that locality. No building can be considered modern, complete or capable of answering all demands that can be made upon it unless its equipment makes possible the use of so efficient a source of energy as gas.

## Gas in the Residence

Gas in the residence is universally used for:

Cooking	Lighting
Water Heating	Auxiliary Heating
Laundry Work	

More and more, in recent years, gas is also being used in central heating plants for either steam or hot water, with its advantages of cleanliness, space saving and positive automatic control.

## Gas in the Hotel

Gas in the hotel is universally used for:

Main Kitchens	Pastry Shops
Banquet Kitchens	Water Heating
Serving Pantries	Laundry
Bake Shops	Water Sterilizing
Confectionery Shops	Auxiliary Space Heating

## Gas in the Loft Building

Gas has a great number of uses in the loft building such as:

Water Heating	Steam Boilers
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In addition, all manner of furnaces, burners, ovens, etc., using gas are used depending upon the type of manufacturing to which the building is devoted.

## Gas in the Office Building

The modern office building uses gas for:

Water Heating
Water Sterilizing
Kitchens (where clubs or restaurants are tenants, as is now generally the case).

Besides these, the increasingly common practice of doctors, dentists and other professional men locating in this type of building, creates the demand for gas in many and varied small appliances.

## Cost of Piping

The cost of gas piping, if put in at the time of erection, is relatively small when compared to the total cost of the building and compared to the increased rental value of the premises so equipped. This cost varies from 0.10 to 1.0% of the total cost of the building, the latter figure covering the most elaborate piping layout required to cover every possible contingency. But if the piping has to be put in after erection due to demands of

prospective tenants, which is a quite general case, the cost will be greatly increased, besides which the installation is liable to be unsightly and the work annoying and inconvenient to the occupants of the building.

#### Size of Pipe

Under the heading "How to Calculate Pipe Layout," the method of arriving at the size of pipe needed for various requirements will be given. It is essential, however, that ample provision as to pipe sizes should be made at the start, so that any unknown contingency of future occupation can be met as well as the known present needs.

The size of gas pipe necessary to install depends on the following factors:

- Length of pipe.
- Maximum gas consumption to be provided for.
- Allowable loss in pressure from service pipe to appliance.
- Specific gravity of the gas.

The specific gravity of most gases varies between .45 and .65, and as the capacity of pipe is only affected by this factor inversely as the square root, it is sufficiently accurate to use an assumed gravity of .6 for all calculations. Tables 1 and 2 are both based on this value but if it is desired to use the exact gravity for a particular condition, the values in the two tables can be corrected by multiplying by  $\sqrt{\frac{0.6}{\text{Sp. gr.}}}$

The unit for measuring the pressure of manufactured gas is inches of water, and it will be noted in Table 1 that the gas capacities for the various pipe sizes are given for a .2-in. pressure drop. In Table 2 the drop allowed is .5-in. These two tables are given in order to compensate for the different conditions encountered in calculating lateral feed pipes as against vertical or riser pipes. Table 1 is for laterals and Table 2 for risers. There are two reasons which permit a greater pressure drop to be allowed on risers. First, the drop in pressure due to the ordinary friction loss is reduced by the gas column which is lighter than air and therefore causes an increase in pressure with altitude. For a gas with a specific gravity of .6 this increase is approximately 1 in. (of water) per 170 ft. of elevation.

Second, the possibility of all gas appliances be-

TABLE 1  
Showing Capacity of Pipe of Different Diameters and Lengths in Cu. Ft. per Hour with Pressure Drop of 0.2 In. and Specific Gravity 0.60  
To Be Used for Figuring Laterals and Service Pipes.

Length of pipe, ft.	Diameter of pipe, in.								
	1/8	1	1 1/4	1 1/2	2	3	4	6	8
15	168	350	620	960	2600	5400	11200	31000	62000
30	120	245	430	680	1400	3800	7900	21500	44000
45	98	200	355	530	1150	3200	6500	18000	36500
60	84	175	310	480	1000	2700	5600	15500	31500
75	76	155	275	430	890	2450	5000	13700	28000
90	70	145	250	395	810	2260	4550	12500	26000
105	64	132	232	370	750	2100	4200	11500	24000
120	60	125	215	340	700	1950	4000	11000	22000
150	54	110	195	310	630	1750	3550	9800	20000
180	49	100	175	280	570	1600	3200	8900	18000
210	44	94	165	260	530	1450	3000	8200	16500
240	43	88	155	240	500	1350	2800	7700	16000
270	40	83	145	230	470	1300	2650	7100	15000
300	38	79	138	215	440	1250	2500	6900	14000
450	31	64	112	176	360	1000	2050	5600	11500
600	27	56	97	152	315	860	1750	4900	10000

ing in use at one time is very remote, particularly on the different floors. A greater diversity can be expected when we include a variety of uses than when only one use is considered and a more liberal factor can therefore usually be allowed for risers than for laterals.

In order to show how Tables 1 and 2 can be used in designing a pipe layout, an example applied to each will be given. Assume that a hotel is to be erected with gas requirements as called for in Fig. 1 (next page). The number marked in each rectangle is the maximum gas demand for each requirement and is expressed in cu. ft. of gas per hour. The hotel is 16 stories high with a basement and sub-basement. On the roof there is a restaurant with a kitchen having a maximum demand of 1500 cu. ft. per hour. The tenth floor has a banquet kitchen, the first floor a barber and tailor shop, the basement contains the main kitchen, bakery and laundry and the sub-basement a water heater and drinking water sterilizer. On each of the room floors there are service pantries and radiant fireplace heaters in the sitting rooms of the suites.

To figure the size of the risers, start at the top floor. Here we have 1500 cu. ft. which must travel through 270 ft. of pipe; refer to Table 2 and we find it will be necessary to provide 3-in. pipe. On the sixteenth floor we have 1500+400=1900 cu. ft. which must travel through 255 ft. of pipe; this also calls for 3-in. pipe, etc. (See computation table on Fig. 1 for complete layout.) The service will have to supply 18,000 cu. ft. per hour and as it is 45 ft. long we find from Table 1 (laterals) that this calls for 6-in. pipe.

As an example for calculating pipe sizes for laterals we will figure the requirements for the basement where we have the main kitchen, bakery and laundry. Fig. 2 (second page following) shows a plan of this floor, and it will be noted that the kitchen which has a demand of 3000 cu. ft. per hour is located 45 ft. from the riser. Refer to Table 1 and we find that it will require 3-in. pipe for this section. The laundry and bakery are so located that it will be necessary to have a common lateral for both as far as to the laundry. The common run for both is 120 ft. long and will have to provide for 2000+1500=3500 cu. ft. (4-in. pipe). From the laundry to the bakery is 60 ft. additional, making a total of 120 ft.+60 ft.=180 ft., with a demand of 1500 cu. ft. per hour. Table 1 shows that 180 ft. of 3-in. will pass 1600 ft., which is therefore ample.

TABLE 2  
Showing Capacity of Pipe of Different Diameters and Lengths in Cu. Ft. per Hour with Pressure Drop of 0.5 In. and Specific Gravity 0.60  
To Be Used for Figuring Verticals and Risers.

Length of pipe, ft.	Diameter of pipe, in.									
	1/8	1	1 1/4	1 1/2	2	3	4	5	6	8
15	270	560	980	1540	3200	8600	17800	31000	49000	100000
30	190	390	680	1080	2200	6100	12500	22000	34500	71000
45	155	320	560	890	1800	5000	10300	18000	28000	58000
60	135	280	490	770	1600	4300	8900	15500	24500	50000
75	120	250	430	680	1400	3800	8000	14000	22000	45000
90	110	230	400	620	1300	3500	7300	12500	20000	41000
105	102	210	370	580	1200	3300	6800	11800	18500	38000
120	96	200	345	545	1100	3100	6300	11000	17400	36000
150	87	180	310	490	1000	2700	5600	9800	15500	32000
180	79	160	280	445	900	2500	5100	8900	14000	29000
210	73	150	260	410	840	2300	4800	8300	13600	27000
240	68	140	245	385	790	2150	4400	7700	12300	25000
270	65	130	230	365	740	2050	4200	7300	11500	23500
300	61	125	220	345	710	1950	4000	7000	11000	22500
450	50	100	180	280	570	1600	3200	5600	8900	18000
600	43	88	150	240	490	1350	2800	4800	7600	15500

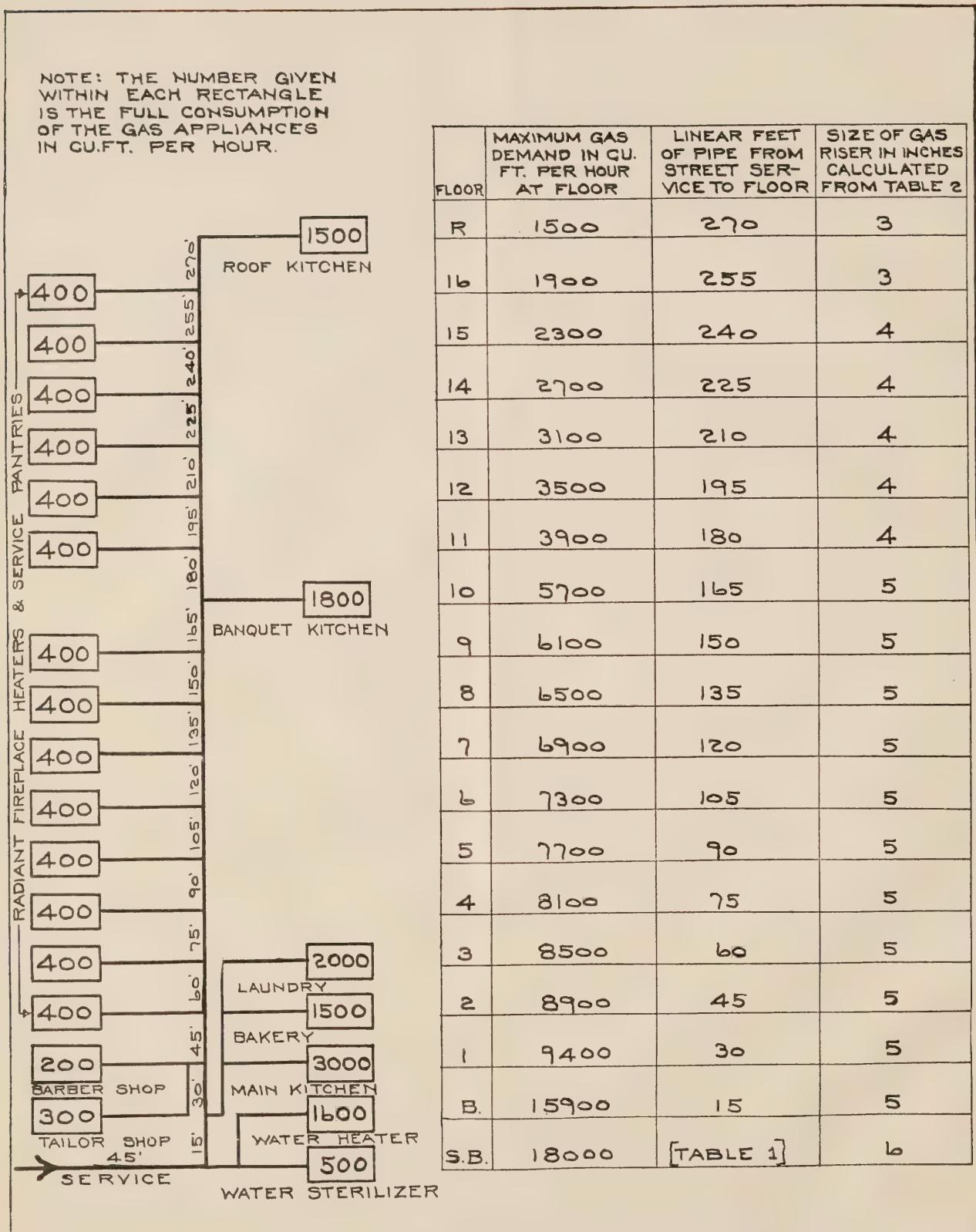


Fig. 1. Diagram Showing the Gas Demand for the Various Floors of a Typical Hotel

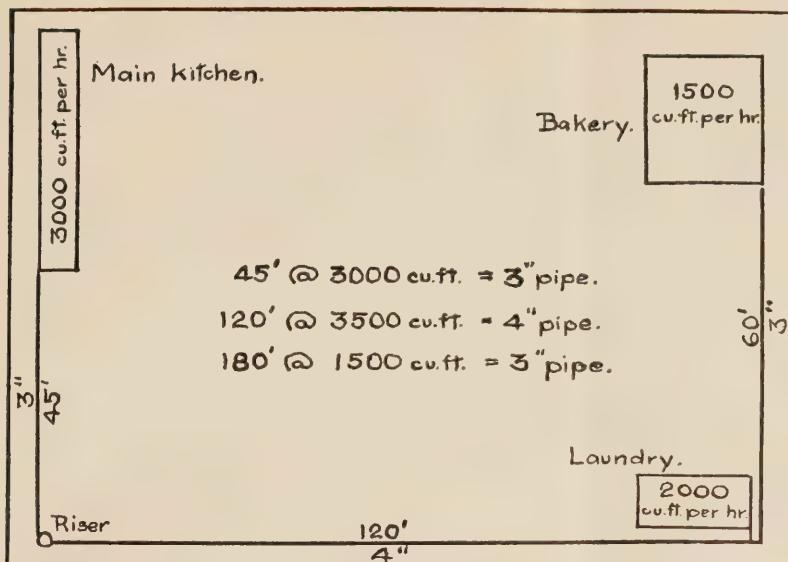


Fig. 2. Layout for Basement

### Selecting Appliances

In selecting gas appliances for installation care should be taken that only the best appliances—quality merchandise—are selected. The American Gas Association through its Committee on Standard Gas Appliance Specifications, has drawn up specifications for the construction of gas appliances which insure the greatest efficiency, durability and service. These specifications have been adopted by the leading manufacturers of appliances and by the gas companies. Before selecting the appliances, therefore, consult with the local gas company to insure getting only standard appliances.

### Installation of Gas Appliances

The most important factor that affects the safe and economical operation of gas appliances is the provision of adequate supply piping. This will assure constant and sufficient gas pressure and will result in the uniform operation of gas burners under conditions of proper combustion.

In the actual installation of gas appliances, the factor of ventilation must always be carefully considered. A properly designed appliance, operating under correct adjustment, will, when burning, produce only carbon dioxide and water vapor, both of which are absolutely harmless. It is necessary, however, in order that this condition be maintained, that sufficient ventilation be provided. If, therefore, large gas consuming appliances are to be installed in relatively small spaces, a flue or chimney connection is necessary. Further, gas appliances operating under automatic control should always be vented, as should all appliances installed in bathrooms. This practice should never be deviated from unless the room is very large and provided with exceptionally large window surface.

In the case of individual room heaters for use in the various rooms, they can be operated safely

without vent connections provided that they do not exceed the correct heater capacity (equivalent square foot rating) for each room. If they do not exceed this heater capacity, the heater or heaters can burn indefinitely in a room having approximately three air changes per hour without ever raising the carbon dioxide content to a proportion that will be in the least measure harmful.

Where flues and flue connections are necessary, these chimneys or flues should be of the same size as required for solid fuel appliances of equivalent capacity. As for design and material, the specifications of the National Board of Fire Underwriters should be followed. Smooth tile lined flues are very satisfactory for venting gas appliances.

The cases quite frequently found where makeshift vents for gas appliances have been installed are due to the fact that sufficient flues to care for the various requirements are seldom provided in buildings. As an example, every cellar should have at least two flue outlets, one for the heating boiler or furnace and one for the hot water supply heater. The American Gas Association urgently recommends the more general provision of flues in buildings and homes.

### The A. G. A.

The American Gas Association will be glad to consult with architects or builders and through its engineering staff at the headquarters office, advise on any questions relating to gas piping or selection or installation of appliances. In addition, the Association has printed from time to time complete information on such subjects as selection, design and installation of water heating installations, design and installation of central house heating installations and various books on the many industrial applications of gas which should prove of great value to the architect and builder.

They will always be glad to be consulted on any matters relating to the piping of buildings and to aid in the selection of the proper installations of gas appliances of all descriptions.

### Summary

The observations and study given to building problems by engineers of the American Gas Association show conclusively that buildings where ample provision has been made for gas piping and flue outlets are those most easily rented.

If, therefore, ample gas piping is provided when buildings of all classes are erected, if adequate provision for flues is made, such structures will be thoroughly equipped to make use of gas, thereby assuring greater flexibility, enhanced revenue possibilities, greater comfort and economy for their tenants and the nearest approach to permanent efficiency as a whole which it is possible to attain.

If It's Done With Heat, You Can Do It Better With Gas.



1



4



8



2



5



9



3



6



7



1—Apartment Building, 6039-41 Oglesby Ave., Chicago.  
2—Apartment Building, 18th and Rittenhouse Sts., Philadelphia.  
3—Biltmore Apartments, Overlook Rd., Euclid Heights, Cleveland.  
4—Fort Sanders Manor, Knoxville, Tenn.  
5—Apartment Building, 580 Park Ave., New York City.

6—Rogers Apartment, Knoxville, Tenn.  
7—Residence, 54th and Wynnefield Ave., West Philadelphia.  
8—Residence, McCallum and Ellett Sts., Germantown, Pa.  
9—Houses, Baltimore, Md.  
10—Apartment Building, 2651 Euclid Heights Blvd., Cleveland.

Some of the Thousand  
Furnished with Gas  
with Lorain Ovens



of New Structures  
Ranges Equipped  
Heat Regulators

11—First Christian Church, Mt. Carmel, Ill.

12—Apartment Building, Glenwood and Balmoral Avenues,  
Chicago.

13—Residence, 603 Cliveden Ave., Germantown, Pa.

14—Glenville Masonic Temple, Cleveland.

15—B'nai Israel Temple, East Liverpool, Ohio.

16—Aconda Court Apartments, Knoxville, Tenn.

17—Apartment Building, 1426 Elmdale Ave., Chicago.

18—Apartment Building, Yale Avenue and 66th St., Chicago.

19—Chase Apartments, 4931 Lindell Boulevard, St. Louis, Mo.



# The Cookery Equipment now Being Installed in the Leading Schools of America

**G**ACH year, in over sixteen hundred leading schools and colleges, thousands of young women are taught to cook by the aid of the Lorain Red Wheel, and these young women will soon be buying or renting homes of their own.

Leading architects realize that the patrons of a school that offers courses in Home Economics expect that school to hold a position of leadership in the practical training of home makers and in the introduction of modern, scientific household appliances. Parents do not wish their daughters to be trained in laboratories that are lagging behind the homes of the community in the adoption of time-saving, labor-lightening kitchen equipment.

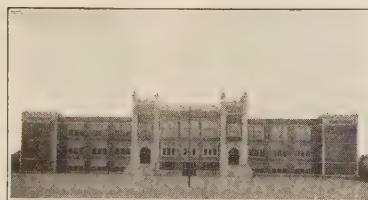
On the next few pages appears only a partial list of the 1612 schools and universities using Lorain-equipped Gas Ranges and Oven Stacks to teach the Science of Time and Temperature Cookery. If you want a complete list of the schools in your vicinity that use Lorain-equipped Gas Ranges, address American Stove Company, St. Louis, Mo.

## A Partial List of 1612 Schools and Universities Using Lorain-equipped Gas Ranges Follows:

*(Additions are being made to this list each day)*

### ALABAMA

Woodlawn High School, Birmingham.  
High School, Ensley.  
Junior High School, Selma.



Woodlawn High School  
Birmingham, Ala.

### ARIZONA

High School, Bisbee.  
University of Arizona, Tucson.

### ARKANSAS

Fort Smith High School, Ft. Smith.  
Helena High School, Helena.  
Central High School, Pine Bluff.

### CALIFORNIA

Alameda High School, Alameda.  
Beardsly School, Bakersfield.  
Burbank School, Berkeley.  
Burlingame Grammar School, Burlingame.  
Chico State Normal, Chico.  
Chino Grade School, Chino.  
Chula Vista Intermediate School, Chula Vista.  
Colusa High School, Colusa.  
High School, Dinuba.  
Downey Grammar School, Downey.  
Gilroy High School, Gilroy.  
Glendale Union H. S., Glendale.  
Hollywood High School, Hollywood.  
Huntington Park High School, Huntington Park.

LaJolla Jr. High School, LaJolla.  
Long Beach Polytechnic High School,  
Long Beach.  
Central Jr. High School, Los Angeles.  
Hollenbeck Heights Jr. High School,  
Los Angeles.  
LaFayette Jr. High School, Los Angeles.  
LeConte Jr. High School, Los Angeles.  
Los Angeles High School, Los Angeles.  
Manual Arts High School, Los Angeles.  
San Pedro High School, Los Angeles.  
University of California, Southern  
Branch, Los Angeles.  
Virgil Jr. High School, Los Angeles.  
Departmental School, Modesto.  
High School, Modesto.  
Monrovia City High School, Monrovia  
City.  
Ocean Beach Grade School, Ocean  
Beach.  
Orcutt Intermediate School, Orcutt.  
Oxnard Union High School, Oxnard.  
McKinley High School, Pasadena.  
Pasadena High School, Pasadena.  
Pittsburg High School, Pittsburg.  
Girls High School, Riverside.  
Junior College & Manual Arts High  
School, Riverside.  
Francis Parker High School, San Diego.  
Memorial Junior High School, San Diego.  
Roosevelt Jr. High School, San Diego.  
San Diego High School, San Diego.  
State Teachers College, San Diego.  
Gallileo High School, San Francisco.  
Lux School, Industrial Training for Girls,  
San Francisco.  
Grant School, San Jose.  
Washington School, San Jose.  
Santa Maria High School, Santa Maria.  
Lincoln Jr. High School, Santa Monica.  
Sebastopol High School, Sebastopol.  
Sunol High School, Sunol.  
Tustin High School, Tustin Park.  
California School for Girls, Ventura.  
High School, Ventura.  
High School, Yuba City.

### CANADA

University of Alberta, Edmonton, Al.  
MacDonald Institute, Ont. Agri. Col.,  
Guelph, Ont.  
Ottawa Technical School, Ottawa.  
Ontario College of Education, Toronto,  
Ontario.  
University of Toronto, Toronto.  
Daniel McIntyre Collegiate School, Win-  
nipeg.

### COLORADO

State Preparatory School, Boulder.  
University of Colorado, Boulder.  
North Side High School, Denver.  
High School, Ft. Collins.  
State Agricultural College, Ft. Collins.  
High School, Grand Junction.  
Colorado State Teachers' College, Greeley.  
High School, Greeley.  
Thatcher School, Pueblo.  
Trinidad High School, Trinidad.

### CONNECTICUT

High School, Bristol.  
Boardman Trade School, New Haven.  
Connecticut College, New London.  
Elizabeth Street School, Norwich.



Cookery Instruction Department  
Woodlawn High School  
Birmingham, Ala.

**CONNECTICUT (Continued)**

Crosby High School, Waterbury.  
Dietetics School, Waterbury Hospital,  
Waterbury.  
Waterbury High School, Waterbury.

**DELAWARE**

Caesar Rodney School, Wyoming.

**DISTRICT OF COLUMBIA**

Experimental Kitchen Agricultural Dept.,  
Washington.  
George Washington University, Wash-  
ington.

**FLORIDA**

St. Ann's-By-The-Lake School, West  
Palm Beach.  
Florida State College for Women,  
Tallahassee.  
Hillsboro High School, Tampa.

**GEORGIA**

O'Keefe Jr. High School, Atlanta.  
Houghton School, Augusta.  
Tubman High School, Augusta.  
16th Street School, Columbus.  
Savannah High School, Savannah.

**IDAHO**

Boise High School, Boise.  
St. Margaret's Academy, Boise.  
Idaho Technical Institute, Pocatello.

**ILLINOIS**

District School, No. 217, Argo.  
Franklin Grade School, Bloomington.  
Irving Grade School, Bloomington.  
Lincoln Grade School, Bloomington.  
So. Illinois State Normal, Carbondale.  
Belden School, 4257 North Tripp Ave.,  
Chicago.  
Brennan School, Chicago.  
Chicago Normal College, Chicago.  
Curtis School, 50 E. 115th St., Chicago.  
Dietetics School, Mercy Hospital, Chicago.  
Robert Emmet School, Chicago.  
Englewood High School, Chicago.  
Erickson Public School, Chicago.  
Fiske School, 6145 Ingleside Ave.,  
Chicago.  
Garfield School, 1426 Newberry Ave.,  
Chicago.  
Carter Harrison Technical School,  
Chicago.  
Hayt School, 1518 Granville Ave.,  
Chicago.  
Patrick Henry School, Chicago.  
Holden School, 3055 So. Loomis St.,  
Chicago.  
LaFayette School, Chicago.  
McClellan School, 3527 So. Wallace St.,  
Chicago.  
McCormick School, 2720 So. Sawyer  
Ave., Chicago.  
John B. Murphy School, Chicago.  
Nurses' Dietetics Training School, Wes-  
ley Hospital, Chicago.  
William Penn School, 1616 So. Avers  
Chicago.  
Philips High School, Chicago.  
Pullman Manual Training School,  
Chicago.  
Shepard School, 2839 Filmore St.,  
Chicago.  
Skinner School, 1068 W. Jackson Blvd.,  
Chicago.  
St. Mary's High School, Chicago.  
Carl Schurz High School, Chicago.

Stowe School, Chicago.  
University of Chicago High School.  
University of Chicago, Chicago.  
Walter High School, 2007 Orchard St.,  
Chicago.



*Washington Grade School  
Joliet, Ill.*

Crystal Lake Community High School,  
Crystal Lake.  
Milliken University, Decatur.  
Roosevelt Junior High School, Decatur.  
North Dixon High School, Dixon.  
Dundee Commercial High School,  
Dundee.  
Elgin High School, Elgin.  
Foster School, Evanston.  
Lombard College, Galesburg.  
Thornton Township High School, Harvey.  
Deerfield High School, Highland Park.  
Illinois Women's College, Jacksonville.  
Farragut Grade School, Joliet.  
Roosevelt School, Joliet.  
Washington Grade School, Joliet.  
Kewanee High School, Kewanee.  
Lyons Township High School, LaGrange.  
Litchfield Grade School, Litchfield.  
Proviso Township High School, May-  
wood.  
Manual Arts School, Moline.  
Morrison High School, Morrison.  
Murphysboro High School, Murphysboro.  
Oak Park and River Forest Township  
High School, Oak Park.  
Ottawa Township High School, Ottawa.  
Bradley Polytechnic Institute, Peoria.  
East Peoria Community High School,  
Peoria.  
Pontiac Township High School, Pontiac.  
Webster High School, Quincy.  
Rosary College, River Forest.  
Rochelle High School, Rochelle.  
Rockford College, Rockford.  
Seneca High School, Seneca.  
Domestic Science School, Springfield.  
Sterling Township School, Sterling.  
Grant School, Streator.  
East State Street High School, Sycamore.  
University of Illinois, Urbana.

**INDIANA**

Alexandria High School, Alexandria.  
Senior High School, Anderson.  
Domestic Science Dept. Indiana Univer-  
sity, Bloomington.  
Allen High School, Bluffton.  
Catholic High School, Decatur.  
Washington High School, E. Chicago.  
Central School, Elkhart.  
Elwood High School, Elwood.  
Evansville College, Evansville.  
South Side High School, Ft. Wayne.  
Franklin High School, Franklin.  
Goshen High School, Goshen.  
Industrial High School, Hammond.  
Lincoln High School, Huntington.  
Washington High School, Indiana Harbor.  
Mrs. Marks' School of Domestic Science,  
Indianapolis.  
Purdue University, LaFayette.  
James Whitcomb Riley Junior H. S.,  
Logansport.

South Side High School, Muncie.  
New Castle High School, New Castle.  
High School, Pendleton.  
South Bend High School, South Bend.  
Indiana State Normal School, Terre  
Haute.

**IOWA**

Home Economics Dept., Iowa State Col-  
lege, Ames.  
Wilson High School, Cherokee.  
High School, Clinton.  
University of Dubuque, Dubuque.  
Penn College, Oskaloosa.  
North Junior High School, Sioux City.  
High School, Waterloo.  
Webster City High School, Webster City.

**KANSAS**

Labette Co. High School, Altamont.  
High School, Argentine.  
Roosevelt School, Atchinson.  
Senior High School, Augusta.  
High School, Coffeyville.  
Junior High School, Coffeyville.  
Concordia High School, Concordia.  
Junior High School, El Dorado.  
Elmdale Rural High School, Elmdale.  
Emporia High School, Emporia.  
High School, Fredonia.  
High School, Humboldt.  
Iola High School, Iola.  
University of Kansas, Lawrence.  
Kansas State Agricultural College, Man-  
hattan.  
Manhattan High School, Manhattan.



*Domestic Science Class Room  
University of Chicago  
Chicago, Ill.*

Shawnee Mission Rural High, Merriam.  
Ottawa University, Ottawa.  
Junior High School, Parsons.  
State Normal School, Pittsburg.  
Richmond High School, Richmond.  
Rosedale High School, Rosedale.  
Sedgwick High School, Sedgwick.  
Boswell High School, Topeka.  
High School, Topeka.  
Washburn College, Topeka.  
James Allison School, Wichita.  
Friends University, Wichita.  
Roosevelt High School, Wichita.  
Southwestern College, Winfield.

**KENTUCKY**

Junior High School, Ashland.  
High School, Bowling Green.  
Senior High School, Lexington.  
Central Colored High School, Louisville.  
Domestic Science Dept., University of  
Ky., Louisville.  
University of Louisville, Louisville.  
Western Departmental School, Louisville.  
Washington Jr. High School, Paducah.

# HANDBOOK on GAS RANGES

## LOUISIANA

Junior High School, Baton Rouge.  
State High School, Ida.  
High School, Lake Charles.  
High School, Minden.  
Monroe City High School, Monroe.  
High School, Moingsport.  
Robert E. Lee Public School, New Orleans.  
Gayarre School, New Orleans.



*Austin High School  
Austin, Minn.*

Domestic Science Dept., Sophia Newcomb College, New Orleans.  
Washington School, New Orleans.  
A. H. Wilson School, New Orleans.  
Central High School, Shreveport.

## MAINE

Bangor High School, Bangor.  
Westbrook High School, Westbrook.

## MARYLAND

Pimlico School, Baltimore.  
Public School No. 13, Baltimore.  
Public School No. 40, Baltimore.  
Public School No. 78, Baltimore.  
Public School No. 112, Baltimore.  
Public School No. 107, Baltimore.  
Crisfield High School, Crisfield.  
Allegheny County High School, Cumberland.  
Hood College, Home Economics Dept., Frederick.

## MASSACHUSETTS

Priscilla Proving Plant, Boston.  
Simmons College, Boston.  
Everett High School, Everett.  
Sacred Heart Convent, Fall River.  
Framingham Normal School, Framingham.  
The Gloucester High School, Gloucester.  
Haverhill High School, Haverhill.  
Lowell High School, Lowell.  
Malden High School, Malden.  
Newton High School, Newton.  
High School, Peabody.  
Morton Jr. High School, Plymouth.  
Springfield Continuation School, Springfield.  
Wellesley College, Wellesley.  
Worcester Girls Club Trade School, Worcester.

## MICHIGAN

High School, Albion.  
Allegan High School, Allegan.  
High School, Benton Harbor.  
Big Rapids High School, Big Rapids.  
Cass Technical High School, Detroit.  
Michigan Agric. College, Home Econ. Dept., East Lansing.  
Escanaba High School, Escanaba.  
High School, Grand Haven.  
Creston Jr. High School, Grand Rapids.

Stocking School, Grand Rapids.  
Union High School, Grand Rapids.  
Hancock High School, Dom. Sci. Dept., Hancock.  
Ishpeming High School, Ishpeming.  
New Lincoln High School, Kalamazoo.  
Pauline Stearns Hospital (Dietetics Kitchen), Ludington.  
Marshall Public School, Marshall.  
John N. Davis School, Menominee.  
Lincoln School, Monroe.  
Mt. Clemens High School, Mt. Clemens.  
Central State Normal, Mt. Pleasant.  
Mt. Pleasant High School, Mt. Pleasant.  
Junior High School, Muskegon.  
High School, Muskegon Heights.  
High School, Niles.  
Petoskey High School, Petoskey.  
Plainwell High School, Plainwell.  
Pontiac High School, Pontiac.  
High School, Port Huron.  
River Rouge High School, River Rouge.  
High School, St. Joseph.  
High School, Sault Ste. Marie.

## MINNESOTA

Albert Lea High School, Albert Lea.  
Austin Central High School, Austin.  
Bemidji County High School, Bemidji.  
Washington Jr. High School, Duluth.  
Hibbing Co. H. S., Hibbing.  
Lincoln High School, Mankato.  
Central High School, Minneapolis.  
Franklin Jr. High School, Minneapolis.  
Johnson School, Minneapolis.  
Jordan Jr. High School, Minneapolis.  
Dept. of Home Economics, University of Minn., Minneapolis.  
Seward Jr. High School, Minneapolis.  
Concordia College, Moorehead.  
Owatonna High School, Owatonna.  
Hancock High School, St. Paul.  
Jefferson School, St. Paul.  
South St. Paul High School, St. Paul.  
University Farm School Home Economics Dept., University of Minnesota, St. Paul.  
Whittier High School, St. Paul.  
Stillwater High School, Stillwater.  
Virginia High School, Virginia.

## MISSISSIPPI

Main Street High School, Hattiesburg.  
Deaf and Dumb Institute, Jackson.

## MISSOURI

Laura Speed Elliot High School, Booneville.  
John Burroughs School, Clayton.  
Missouri State University, Columbia.  
Lincoln University, Jefferson City.  
Kensington School, Kansas City.  
Horace Mann School, Kansas City.  
McCoy Elementary School, Kansas City.  
Woodland Teachers Training College, Kansas City.  
Yeager School, Kansas City.  
High School, Lexington.  
High School, Marshall.  
High School, Moberly.  
Lindenwood College, St. Charles.  
Dietetics Kitchen City Hospital, St. Louis.  
St. Margaret's Convent, St. Louis.  
New High School, Sedalia.  
Reed High School, Springfield.  
High School, Webster Groves.

## MONTANA

High School, Billings.  
High School, Great Falls.  
Junior High School, Great Falls.

Urseline Academy, Great Falls.  
Bungalow Public School, Helena.  
University of Montana, Missoula.

## NEBRASKA

High School, Beatrice.  
Kramer High School, Columbus.  
Fairbury High School, Fairbury.  
Fremont High School, Fremont.  
Grand Island High School, Grand Island.  
Dept. of Home Economics, University of Nebraska, Lincoln.  
Norfolk High School, Norfolk.

## NEW JERSEY

Clifton High School, Clifton.  
Cliffside Park High School, Grantwood.  
Domestic Science Kitchen, Haddonfield High School, Haddonfield.  
Hamilton St. School, Harrison.  
Franklin School, Hasbrouck Heights.  
Kearney High School, Kearney.  
Franklin School, Lyndhurst.  
Central Ave. School, Madison.  
Milburn High School, Milburn.  
Avon Avenue School, Newark.  
Elliott Street School, Newark.  
Girls' Continuation School, Newark.  
South 10th Street School, Newark.  
Rutger's College, New Brunswick.  
Domestic Science Dept., Paterson High School, Paterson.  
Plainfield High School, Plainfield.  
Pleasantville High School, Pleasantville.  
Roosevelt School, Ridgefield Park.  
Rutherford High School, Rutherford.

## NEW MEXICO

Albuquerque High School, Albuquerque.  
St. Mary's School, Albuquerque.  
State Univ. of New Mexico, Albuquerque.

## NEW YORK

New York Normal College, Albany.  
Central High School, Dom. Sci. Dept., Binghamton.  
Lafayette High School, Buffalo.  
Masten Park High School, Buffalo.  
State Normal School, Buffalo.  
Public School No. 19, Corona.  
Elmira College, Elmira.



*Lafayette High School  
Buffalo, N. Y.*

Geneva High School, Geneva.  
Hamburg High School, Hamburg.  
Domestic Science School, New York State College of Agriculture, Cornell University, Ithaca.  
The Delineator Experimental Kitchen, Ithaca.  
Public School No. 69, Jackson Heights.  
Kingston High School, Kingston.  
Little Valley High School, Little Valley.

Lynnebrook High School, Lynnebrook.  
 Lyons Union School, Lyons.  
 Columbia University, Teachers' College,  
 Dept. of Foods and Cooking, New  
 York City.



Class in Cookery  
 Lafayette High School  
 Buffalo, N. Y.

Public School No. 72, Borough of  
 Queen, New York City.  
 Public School No. 78, Borough of  
 Manhattan, New York City.  
 Public School No. 71, Borough of  
 Bronx, New York City.  
 Public School No. 192, Borough of  
 Brooklyn, New York City.  
 Public School No. 161, Borough of  
 Brooklyn, New York City.  
 Pratt Institute, Borough of Brooklyn,  
 New York City.  
 Morris High School, Borough of Bronx,  
 New York City.  
 New York Tribune Institute, New York.  
 Public School No. 187, New York City.  
 School of Modern Cookery, New York  
 City.  
 St. Mary's Convent, Winfield, Borough  
 of Queen, New York City.  
 The Academy of Mt. St. Vincent, New  
 York City.  
 Olean High School No. 4, Olean.  
 Oswego High School, Oswego.  
 Penn Yan Public School, Penn Yan.  
 Saratoga High School, Saratoga Springs.  
 Schenectady High School, Schenectady.  
 Thrift Kitchen, Syracuse.

#### NORTH CAROLINA

Central High School, Charlotte.  
 Queen's College, Charlotte.  
 Edgemont High School, Rocky Mt.

#### NORTH DAKOTA

High School, Fargo.  
 Sacred Heart Academy, Fargo.  
 Domestic Science Dept. State Agricultural  
 School, Fargo.  
 High School, Grand Forks.  
 University of N. Dak., Dom. Sci. Dept.,  
 Grand Forks.

#### OHIO

St. Bernard School, Akron.  
 D. S. Dept., University of Akron, Akron.  
 Mount Union College, Alliance.  
 Amherst High School, Amherst.  
 Ashland College, Ashland.  
 Central High School, Barberton.  
 Berea High School, Berea.  
 Bowling Green High School, Bowling  
 Green.  
 Clarendon Avenue School, Canton.  
 McKinley High School, Canton.  
 Chillicothe High School, Chillicothe.  
 Hughes High School, Cincinnati.  
 John Adams High School, Cleveland.  
 Audubon Junior High School, Cleveland.  
 East Technical High School, Cleveland.

Twenty-one

Euclid Park School, Cleveland.  
 Fairmont High School, Cleveland.  
 Hathaway-Brown School, Cleveland.  
 Patrick Henry Junior High School,  
 Cleveland.  
 Mt. Auburn School, Cleveland.  
 Notre Dame Academy, Cleveland.  
 Spencerian College, Cleveland.  
 Sunbeam School, Cleveland.  
 Tremont School, Cleveland.  
 Western Reserve University, Cleveland.  
 West Technical High School, Cleveland.  
 The Y. W. C. A., Domestic Science  
 Dept., Cleveland.  
 Noble School, Cleveland Heights.  
 Roxboro School, Cleveland Heights.  
 St. Joseph's School, Collinwood.  
 Champion Ave. High School, Columbus.  
 East High School, Columbus.  
 Mount Vernon School, Columbus.  
 Ohio State University, Columbus.  
 Cooper School, Dayton.  
 Huffman School, Dayton.  
 Irving School, Dayton.  
 Jackson School, Dayton.  
 Patterson School, Dayton.  
 Steele High School, Dayton.  
 Ohio Wesleyan University, Delaware.  
 Domestic Science Department, Shaw High  
 School, East Cleveland.  
 Kenyon College, Gambier.  
 Horace Mann Jr. High School, Lake-  
 wood.  
 Hawthorne Junior High School, Lorain.  
 Irving Junior High School, Lorain.  
 Lorain High School, Lorain.  
 Longfellow Junior High School, Lorain.  
 Whittier Junior High School, Lorain.  
 Junior High School, Marietta.  
 East Main High School, Ravenna.  
 Ferncliff Hall, Wittenberg College,  
 Springfield.  
 Wittenberg College, Springfield.  
 East Side Central School, Toledo.  
 Nathan Hale School, Toledo.  
 LaGrange School, Toledo.  
 McKinley School, Toledo.  
 Oakdale Public School, Toledo.  
 Knoops' Children's Home, Troy.  
 Public School, Westerville.

#### OKLAHOMA

High School, Bartlesville.  
 The Blackwell High School, Blackwell.  
 Bristow Public School, Bristow.  
 Henryetta High School, Henryetta.  
 Holdenville High School, Holdenville.  
 Jenks High School, Jenks.  
 High School, Jennings.  
 High School, McAlester.  
 Lincoln High School, Nowata.  
 Capitol Hill Jr. High School, Okla-  
 homa City.  
 Classen Junior High School, Oklahoma  
 City.  
 Columbus School, Oklahoma City.  
 Shields Heights School, Oklahoma City.  
 Webster Jr. High School, Oklahoma City.  
 Whittier School, Oklahoma City.  
 Okmulgee High School, Okmulgee.  
 High School, Shawnee.  
 Skiatok High School, Skiatok.  
 A. & M. College, Stillwater.  
 Wagoner High School, Wagoner.

#### OREGON

University of Oregon, Eugene.  
 Girls' Polytechnic School, Portland.

#### PENNSYLVANIA

Athens High School, Athens.  
 Lincoln School, Beaver.  
 Beaver Falls High School, Beaver Falls.

Bethlehem High School, Bethlehem.  
 Liberty High School, Bethlehem.  
 College Hill High School, Beaver Falls.  
 High School, Beaver Falls.  
 Bradford High School, Bradford.



Longfellow Junior High School  
 Lorain, Ohio

Domestic Science Dept., Penn-Hall Col-  
 lege for Girls, Chambersburg.  
 High School, Connellsville.  
 Domestic Science Dept., Cheltenham High  
 School, Elkins Park.  
 High School, Greenville.  
 Domestic Science Dept. of St. Normal  
 School, Indiana.  
 Holy Rosary Convent, Johnsonburg.  
 Wm. A. Cochran High School, Johns-  
 town.  
 Senior High School, Johnstown.  
 High School, Lebanon.  
 Lebanon High School, Lebanon.  
 High School, Lewistown.  
 Meadville High School, Meadville.  
 North Scranton Jr. High, North Scranton.  
 High School, Oil City.  
 Junior High School, Oil City.  
 Oil City Senior High School, Oil City.  
 Drexel Institute, Philadelphia.  
 Domestic Science Dept., Carnegie Insti-  
 tute of Technology, Pittsburgh.  
 J. A. Weber School, Domestic Science  
 Dept., Punxsutawney.  
 Bingerman & Orange Sts. School, Read-  
 ing.  
 Douglas & Weiser School, Reading.



McKinley High School  
 Canton, Ohio

Northeastern Junior High School, Reading.  
 Reading High School for Girls, Reading.  
 Schuykill Seminary (Junior College),  
 Reading.  
 12th & Green Sts. School, Reading.  
 Ridgeway Borough School, Ridgeway.  
 Marywood College, Scranton.  
 Woman's Institute of Domestic Arts &  
 Science, Inc., Scranton.  
 Sunbury High School, Sunbury.  
 Georges Township High School, Union-  
 town.  
 Domestic Science Dept. of Vandergrift  
 High School, Vandergrift.  
 High School, Washington.

#### RHODE ISLAND

Central Falls Parochial High School,  
 Central Falls.  
 High School, Cranston.  
 Lincoln High School, Lincoln (Sayles-  
 ville).

# HANDBOOK on GAS RANGES

Abbott Street School, Pawtucket.  
 Churchill School, Pawtucket.  
 Fairlawn School, Pawtucket.  
 Grove Street School, Pawtucket.  
 Pawtucket High School, Pawtucket.  
 J. C. Potter School, Pawtucket.  
 Samuel Slater School, Pawtucket.

## SOUTH CAROLINA

Girls' High School, Anderson.  
 Columbia High School, Columbia.

## SOUTH DAKOTA

High School, Aberdeen.  
 Junior High School, Aberdeen.  
 Northern Normal & Ind. School, Aberdeen.  
 Junior High School, Mitchell.  
 Emerson Grade and Junior High School, Sioux Falls.  
 State University, Vermillion.  
 Watertown High School, Watertown.

## TENNESSEE

Bristol High School, Bristol.  
 Sullins' College for Girls, Bristol.  
 Tennessee High School, Bristol.  
 Domestic Science Dept. University of Chattanooga, Chattanooga.  
 Clarksville High School, Clarksville.  
 Jackson High School, Jackson.  
 General Hospital (Diet Kitchen), Knoxville.  
 Central High School, Nashville.  
 Duncan School, Nashville.  
 Hume-Fogg High School, Nashville.

## TEXAS

Amarillo High School, Amarillo.  
 Beaumont High School, Beaumont.  
 Breckenridge High School, Breckenridge.  
 Daniel Barker College, Brownwood.  
 Brownwood High School, Brownwood.  
 High School, Cleburne.  
 Crockett School, Dallas.  
 No. Dallas High School, Dallas.  
 College of Industrial Arts, Denton.  
 El Paso High School, El Paso.  
 Moorehead Jr. High School, El Paso.  
 Ball High School, Galveston.  
 John Sealy Hospital Training School for Nurses, Galveston.  
 Central High School, Houston.  
 Southwestern Jr. College, Keene.  
 Marshall High School, Marshall.  
 Brackenridge School, San Antonio.  
 School of Incarnate Word, San Antonio.  
 Mrs. J. W. Hillin's School of Cooking, Waco.  
 Waco High School, Waco.  
 Whitesboro High School, Whitesboro.

## UTAH

Brigham Young University, Provo.  
 Grant High School, Salt Lake City.  
 Latter Day Saints Hospital Diet Kitchen, Salt Lake City.  
 Latter Day Saints College, Salt Lake City.  
 Roosevelt Junior High School, Salt Lake City.  
 South Side Junior High School, Salt Lake City.  
 West Side Junior High School, Salt Lake City.

## VERMONT

Adams School, Burlington.  
 Pomeroy School, Burlington.  
 State Laboratory, Burlington.  
 University of Vermont, Burlington.

## VIRGINIA

Home Economics Dept., Averett College, Danville.



Lorain High School  
 Lorain, Ohio

State Normal School for Women, Harrisonburg.  
 Robert Fulton School, Richmond.  
 J. E. B. Stuart School, Richmond.  
 University of Virginia, Richmond.

## WASHINGTON

J. M. Weatherwax Senior High School, Aberdeen.  
 Everett High School, Everett.  
 Hoquiam High School, Hoquiam.  
 University of Washington, Seattle.

## WEST VIRGINIA

Fairmont State Normal School, Fairmont.  
 Cammack Jr. High School, Huntington.  
 Marshall College, Huntington.  
 Cereda Independent High School, Kanora.  
 West Virginia University, Morgantown.  
 Wellsburg High School, Wellsburg.  
 High School, West Union.  
 Warwood High School, Wheeling.

## WISCONSIN

Main High School, Antigo.  
 Appleton High School, Appleton.  
 Appleton Vocational School, Appleton.  
 Beloit High School, Beloit.  
 High School, Beloit.  
 Lincoln Jr. High School, Beloit.  
 Roosevelt Jr. High School, Beloit.  
 Vocational School, Beloit.  
 High School, Chippewa Falls.  
 County Normal School, Eau Claire.  
 High School, Eau Claire.



Cookery Instruction Department  
 Vocational School  
 Madison, Wis.

High School, Fond du Lac.  
 Junior High School, Fond du Lac.  
 Vocational School, Fond du Lac.  
 Green Bay Vocational School, Green Bay.  
 High School, Janesville.

Vocational School, Janesville.  
 Kohler High School, Kohler.  
 Hogan Public School, LaCrosse.  
 LaCrosse Normal School, LaCrosse.  
 Vocational School, LaCrosse.  
 East Side High School, Madison.  
 Madison Vocational School, Madison.  
 Department of Home Economics, University of Wisconsin, Madison.

Manitowoc High School, Manitowoc.  
 The Manitowoc Vocational School, Manitowoc.

Marinette High School, Marinette.

High School, Marshfield.

Willard Purdy School, Marshfield.

Vocational School, Marshfield.

Clarke Street School, Milwaukee.

Hartford Street School, Milwaukee.

Riverside High School, Milwaukee.

Portage High School, Portage.

Beach Memorial School, Oshkosh.

Vocational School, Oshkosh.

So. Milwaukee High School, So. Milwaukee.

Sheboygan High School, Sheboygan.

Sheboygan Vocational School, Sheboygan.

St. Joseph's Polish Academy, Stevens Point.

State Normal School, Stevens Point.

Stevens Point High School, Stevens Point.

Stoughton High School, Stoughton.

Carpenter School, Superior.

Superior High School, Superior.

Domestic Science Dept. Waukesha High School, Waukesha.

West Allis Vocational School, West Allis.

## WYOMING

High School, Casper.  
 Central High School, Rawlins.  
 Central School Building, Sheridan.  
 Hot Springs County High, Thermopolis.

## NEW ZEALAND

Otage University, Dunedin.

Lorain Oven Heat Regulators are found on Gas Ranges in use in the following famous Research Kitchens:

Calumet Baking Powder Co., Baking Powder.

The Merrell-Soule Co., None Such Mincemeat.

The Davis Company, Baking Powder.

Washburn Crosby Co., Gold Medal Flour.

Igleheart Brothers, Swans Down Flour.

Proctor and Gamble, Crisco.

Jewel Tea Co., Jewel Teas.

McCall's Magazine, Testing Laboratory.

Forecast Magazine, School of Cookery.

Delineator, Test Kitchen.

New York Tribune, Test Kitchen.

Hoosier Mfg. Co., Kitchen Cabinets.

Modern Priscilla, Test Kitchen.

Ladies' Home Journal, Test Kitchen.

Nestle's Food Co., Test Kitchen.

Rumford Baking Powder Co., Baking Powder.

Sar-a-Lee Co., Mayonnaise Dressing.

Aunt Mary's Products Co., Test Kitchen.

Country Gentleman, Research Kitchen.

Soft Wheat Millers Assoc., Test Kitchen.

## Planning the Kitchen

HE KITCHEN is primarily a workshop. Let us have beautiful kitchens without the sacrifice of utility. The kitchen should be planned with the same regard for the economy of time and labor demanded in the planning of any other workshop. The first qualification of an efficient kitchen is its suitability to the kind of work to be done in this home shop, and the number of workers it must house.

### Modern Kitchens are Smaller

The smaller kitchen, compact and well planned, means fewer steps to take and a smaller area of floor covering to keep clean. One hundred and twenty square feet is a good size for the ordinary average-family kitchen.

The large kitchen of the old farmhouse was used as a dining room, living room and laundry, to say nothing of the less important uses. Today, the most common outside work to be done in the kitchen is the ironing. This requires but little extra space, if care is taken to place the ironing-board (with adequate lighting and the plug for the electric iron) in such a position that it does not interfere with the use of other work centers in the room. This is very important, because in most homes, even in those not having permanent help, there is an extra helper for laundry work, and we must count on two people in the kitchen on ironing day.

### Construction and Finish for Cleanliness

The real work of the kitchen is the preparation of food and the clearing away after meals. Cleanliness, not just the appearance of cleanliness, is what the Home Manager strives for in the kitchen. The simpler the construction and the smoother the surface of the room itself and of everything in it, the easier it is to keep the workshop clean. Plain surfaces, rounded corners, and the elimination of mouldings and panelings leave fewer lodging places for dust and dirt. Every surface should have a washable, non-absorbent finish.

Tile is the ideal wall covering and should be used in every case where price permits. Enameled woodwork and plaster, or commercial oil-cloth wall covering makes a good combination with the tile wainscot. Inlaid linoleum or composition floor covering are better for the kitchen floor than tile, because less tiring to the worker. The floor of uncovered wood is difficult to keep clean, and is less attractive in appearance.

Beauty in the kitchen is achieved through the appearance of simplicity and cleanliness. An uncluttered, well-lighted kitchen needs no ornamentation. A dainty stencil on the wall, or a touch of color at the window are attractive in some kitchens, but usually the simpler, the more appropriate the result.

Tinted walls are growing in popularity and there are a number of reasons for this. The all-white kitchen suggests the cleanliness of a hospital or a lunch counter. It was the result of a commendable effort to get away from the dark, dingy colors of the kitchens of twenty years ago. But with all-white kitchens, especially the glossy finishes, a glare results which is hard on the eyes and nerves of persons spending any length of time in the room.

The best place to use the all-white kitchen is in a house which has a sun-exposure that makes a very dark kitchen. This is often the case in apartments. Of course, the more white, the lighter the room will be, but a note of contrast can be introduced without spoiling the effect of light and cleanliness.

Ivory, cream, light buff, and the lighter softer grays, greens and blues are taking the place of white as the predominating color for the kitchen. In a room having a cold, dark, northern exposure the warmer tints of ivory and light buff can be used to advantage, while a kitchen having a sunny southern exposure needs the soft blues and grays to give the effect of coolness in summer and to soften the glare of the sunlight. It is a real economy in heating, as well as a help to the cook, if this "warmest room in the house" can be given the northern sun-exposure. Less heat will be needed in the winter, and the kitchen will be more comfortably cool in summer.

### Ventilating and Lighting

Cross-ventilation is valuable in keeping the kitchen well-aired and free from odors. A built-in dome hood over the stove area is a help, especially if an exhaust fan is provided in the flue. Transoms and high windows help give ventilation as well as good cross-lights on the working surfaces.

The most practical arrangement of artificial lighting fixtures is to place a ceiling fixture of the indirect type in the "busiest" part of the kitchen. This should diffuse the light over the whole room

without glare. Wall-bracket fixtures near the sink, work table, and stove will eliminate cross-shadows and murky corners.

#### **Standard Height Equipment**

The height of equipment is one of the factors which make a kitchen efficient or otherwise. Just as the equipment of a factory must be usable, so the worker must be considered in placing the sink and other work surfaces of the kitchen. The correct height of all table surfaces for the woman of average height is approximately thirty-two inches from the floor. This will bring the top of the sink up to about thirty-six inches from the floor in order to have the bottom, or working surface of the sink at correct height.

#### **The Convenient Sink**

The ideal sink unit has two drain surfaces, so that dishes may be scraped and stacked at one side and placed to drain at the other side, after washing. The cupboards above the sink "counters" save steps. Dishes can be put away after washing, without carrying them across the room. When it is possible to place the sink next an outside wall a window should be placed above the sink. This gives good light and a view which is much more interesting to the person working at the sink than a blank wall or a cupboard door. A neat shelf beneath the window ledge makes a convenient place for storing the supplies and small utensils needed at the sink. Otherwise the window ledge is apt to become a "catch-all".

Built-in shelves and drawers make good use of the space under the counters at each end of the sink, but the space directly under the sink should be open and uncluttered. Whenever practical, have the outlet for the water and soil-pipes beneath the sink in the wall rather than in the floor. The floor is cleaned more frequently than the wall and should be kept free from obstructions which make cleaning difficult.

#### **The Step-Saving Cabinet**

The kitchen cabinet provides the best work table unit. The grouping of supplies and utensils in such a way that those most frequently used are nearest at hand, is best accomplished in the stock designs of the nationally advertised kitchen cabinets. Built-in cupboards for bulk supplies and for utensils which are seldom used, can supplement the cabinet, where space is available, but they cannot take its place in the efficient, convenient kitchen.

#### **Cold Storage in the Home**

The refrigerator is perhaps the one piece of

equipment easiest to vary to meet space requirements, inasmuch as it is always more or less of a special-order proposition. The refrigerator should be placed as far as convenient from the range, to save useless melting of the ice from excessive heat. An alcove near the back entrance is a good location as it saves cleaning up after the tracking in of the iceman. The "outside icer" is a convenience, and should be used in every case where the refrigerator can be placed next an outside wall. Most manufacturers will furnish refrigerators "unfinished" so that they can be finished to match the rest of the woodwork in the kitchen. The dealer will order them at the request of the buyer.

Electrical refrigeration is growing in popularity and in the better homes, the people are realizing that the larger initial expense is the true economy in the end.

The refrigerator should have an ice capacity of at least fifty pounds for the small apartment and not less than one hundred pounds for the small detached house. The walls of a well insulated refrigerator are so thick that it is impractical to attempt the use of the "side-icer" or three-door type in a very narrow space. Where inches are an important consideration, the "apartment style" with the ice compartment across the top is the best solution of the space problem.

The lining of the food compartment should be of smooth, seamless porcelain or other non-porous material which is easily kept in sanitary condition. A drain-pipe should be connected to the refrigerator to save the nuisance of a sloppy "water-pan". Drain pipes must not be connected direct to sewers.

#### **The Lorain-equipped Gas Range**

In space for the Gas Range, allow fifty to fifty-five inches for the modern range of the cabinet type having one baking-oven and one broiler beside the cooking top. Ranges having more ovens for use in larger homes require sixty to eighty inches. Lorain-equipped Gas Ranges are made in sizes and types to fit every kitchen. They are made in a variety of finishes to harmonize with any plan.

The more white enamel used in finishing the range, the easier it is to keep clean. The smooth, hard finish is easy to wipe off, and the white parts help make the work surface light.

If the range is to be placed in a corner of the room, the oven should be next to the wall leaving the top cooking-surface toward the open space, and nearest the light. Space should be allowed between the Gas Range and the wall, for convenience in cleaning. The measure and control of



*Partial View of Research Kitchens, American Stove Company*

oven heat with the Lorain Oven Heat Regulator cuts down the number of appliances needed, and saves the space formerly required for fireless cookers and other auxiliary equipment.

The Lorain Oven Heat Regulator is essential to the really modern, efficient kitchen. A kitchen without a Lorain Oven Heat Regulator is like an office without a telephone. The Home Manager of Today is asking for up-to-date, scientific kitchen equipment to lighten labor and save time. She knows that the Lorain-equipped Gas Range gives perfect baking results—a new, easy, safe way to can—and a “Magic Chef” to watch the Whole Meal Oven Cookery.

#### Grouping Equipment for Efficiency

The arrangement of the equipment according to working routes is the final step in the planning of a labor-saving kitchen. If we plan the order of procedure in the kitchen as we would the work of a shop or office, it is a simple matter to arrange the “work centers” in convenient sequence. All kitchen work can be grouped around five centers, namely,—Storage; Preparation; Cooking; Serving; Clearing after meals.

1. The storage of bulk supplies, and utensils

seldom used, form the first center, which can be farther from the Gas Range and other units.

2. At the cabinet or work table we must assemble the cutlery and cooking utensils as well as the supplies for every-day use, placing the things most frequently used in the most accessible positions. At this center all preparation work is done and foods are ready for the actual cooking which is done at the next work center.

3. The Lorain-equipped Gas range, placed between the Kitchen Cabinet and the serving table, is the “cookery center”. All related equipment, and all utensils used only at the Range should be grouped conveniently near by.

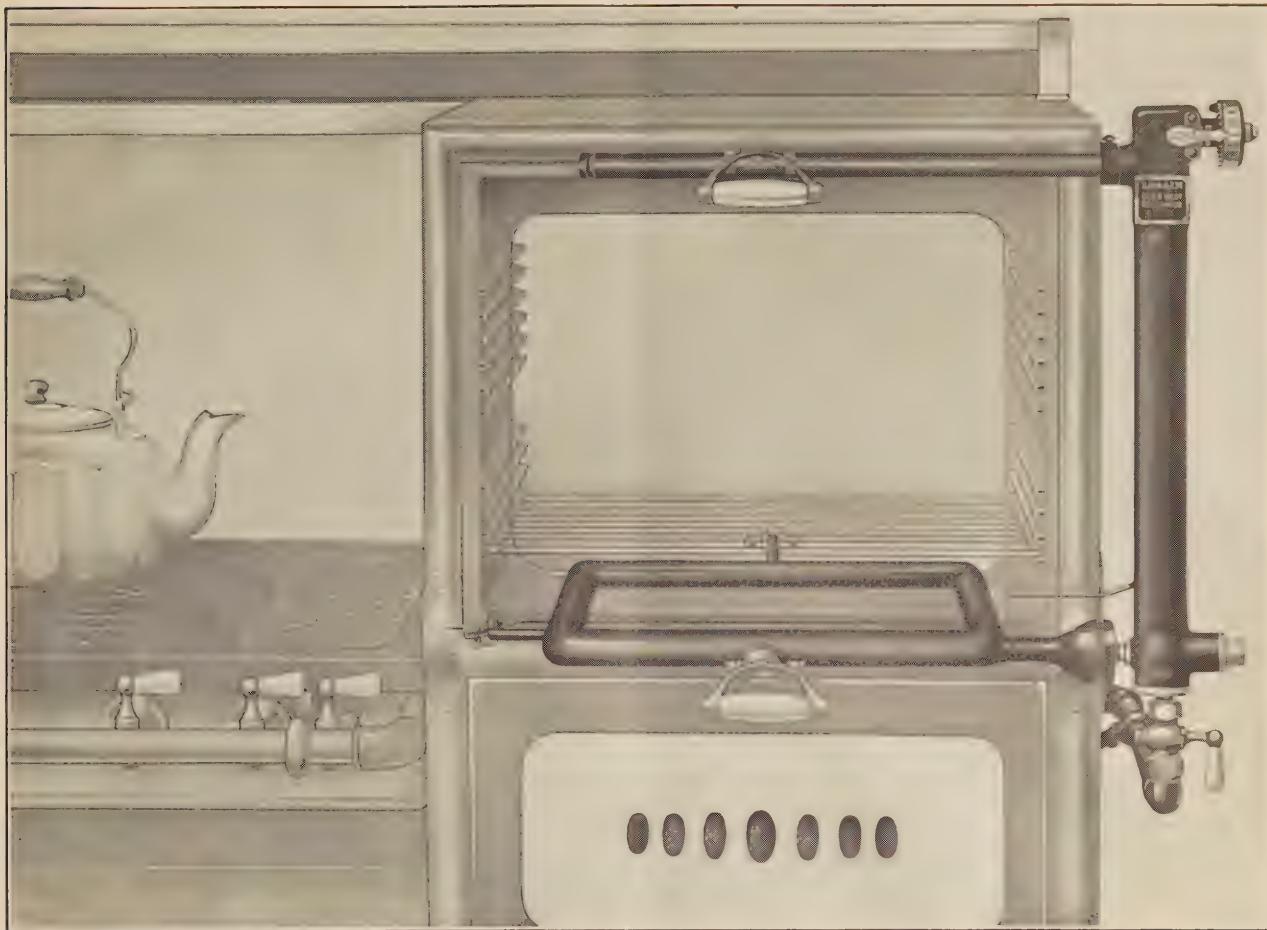
4. The “serving center” is the shelf, counter, or table near the stove, upon which to place the hot dishes as they are taken from the oven. This table should have a heat-resisting metal top.

5. Of course the central unit of the “clearing group” is the sink. The stacking surfaces, the cupboards for dishes, the incinerator or other receptacle for scraps—all tools and supplies for clearing away after meals, belong near the sink.



## Lorain Oven Heat Regulator Nomenclature

- A — Temperature Regulating Wheel
- B — Hub Bolt
- C — Latch
- D — Regulating Wheel Stem
- E — Porcelain Rod Follower
- F — Porcelain Rod Follower Spring
- G — Copper Tube
- H — Negative Porcelain Rod
- I — Asbestos Washer
- J — Copper Tube End-cap
- K — Compounding Lever
- L — Housing
- M — Gas Valve Spring
- N — Gas Valve Plunger
- O — Gas Valve Stem Guide-cap
  
- P — Bottom Cap
- Q — Union Nut
- R — Union Swivel
- S — Gas Valve Seat
- T — Johnson Gas-jet Regulator
- U — Adjustable Orifice Nut
- V — Pilot-light Tube



*Phantom View Showing Application of Lorain Oven Heat Regulator to Gas Range Oven*

## How the Lorain Oven Heat Regulator Operates

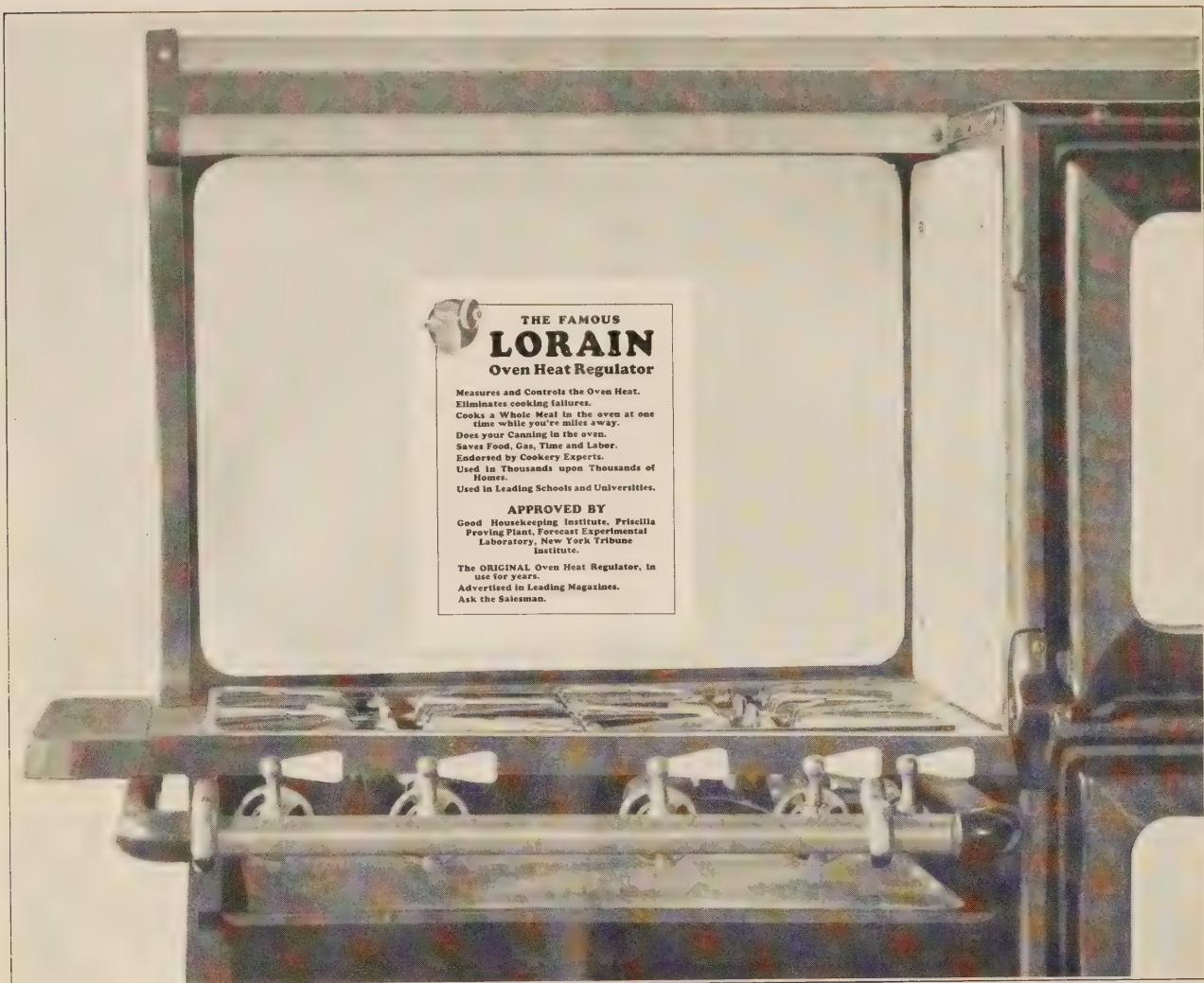
*(For detail see Blue Print on left hand page)*

**D**HEN the Red Wheel "A" is turned until the pointer "C" indicates the desired temperature the action is transmitted through lever "K" to plunger "N," bringing it either closer to or farther from valve "S."

The copper tube "G" extends into the oven. The heat of the oven causes this tube to expand or, in other words, to lengthen. Inside of this copper tube is a porcelain rod "H," which is held against the plug "J" by the pressure of spring "M" against lever "K." Variations in temperature do not affect the porcelain rod in any way.

For instance, as the copper tube lengthens according to the oven heat, the porcelain rod "H" follows along with it, releasing the tension on lever "K" and spring "M." This causes the valve-plunger "N" to move nearer the valve "S," reducing the flow of gas to the oven burner through the orifice "U." As the oven cools off, the action is reversed to maintain the selected temperature.

In this manner different temperatures are obtained and maintained by turning the Red Wheel to vary the position of the valve-plunger "N" in its relation to the valve "S." For instance, if the Red Wheel is set for a high temperature, the plunger "N" will be farther away from valve "S." Thus, more heat in the oven is required to make the copper tube "G" expand sufficiently to cause the lever "K" to move the plunger close enough to control the flow of gas at "S." Again, if the Red Wheel is set for a low temperature the plunger "N" is brought closer to the valve "S," requiring less heat in the oven to control the flow of gas.



*Showing Self-selling Label Attached to Splasher*

## The Mark of Integrity That Accompanies Every Gas Range Manufactured by American Stove Company

THE Label illustrated herewith is pasted on the splasher of every Lorain-equipped Gas Range. It calls attention to the fact that the stove installed in your house or apartment has a Lorain Oven Heat Regulator with the Red Wheel—the Red Wheel that housewives know and have heard their friends talk about—the Red Wheel that the leading Domestic Science schools are using to teach easier, better cooking.

When a woman inspects your new houses or apartments with a view to purchase or renting, she sees this label. It is a mark denoting highest integrity and it identifies the Gas Range you have selected as a modern appliance that saves fuel, time, labor and food for the housewife and her helpers. It signifies that your standards of equipment are high, and that you realize that it is good business judgment to equip kitchens with the finest gas range obtainable—one with Lorain Oven Heat Regulator.

The Most Complete Time and Temperature Cook Book  
Ever Issued Accompanies Every Lorain-equipped Gas Range



*The Lorain "Time and Temperature" Cook Book*

**A**BOVE is shown a picture of "Time and Temperature Oven Cooking," the first cook book devoted exclusively to Time and Temperature Oven Cooking, the method sponsored by American Stove Company following the invention of the Lorain Oven Heat Regulator.

This valuable and comprehensive book has been created and compiled by the Research Kitchens of American Stove Company. It contains 128 pages of recipes for oven-cooked foods, including Whole Meals and directions for Lorain Oven Canning, and has the official Time and Temperature Chart. Some of the chapter headings are: "Roasts and other Baked Meats," "Oven-cooked Fruits and Desserts," "Whole Meal Cooking," "Cakes and Cookies" and "Baked Vegetables."

It is attractively printed, is bound substantially in cloth, and carries many handsome illustrations in four colors. It is recognized as the authoritative book on Time and Temperature Cookery. A copy of this valuable book accompanies *each* Lorain-equipped Gas Range — no matter how many stoves your installation may require.

Among the many prominent Public Libraries of the United States listing these Cook Books are those of Cleveland, Kansas City, Indianapolis, Atlanta, Albany, Oakland, and Washington, D. C.



## Millions of Housewives Read About Lorain-equipped Stoves in These Leading Magazines

**L**IX years ago American Stove Company announced nationally the Lorain Oven Heat Regulator, the wonderful device that measures and automatically maintains the heat of the gas range oven — the greatest contribution to the science of cooking and to the saving of labor for housewives in all the history of cookery appliances.

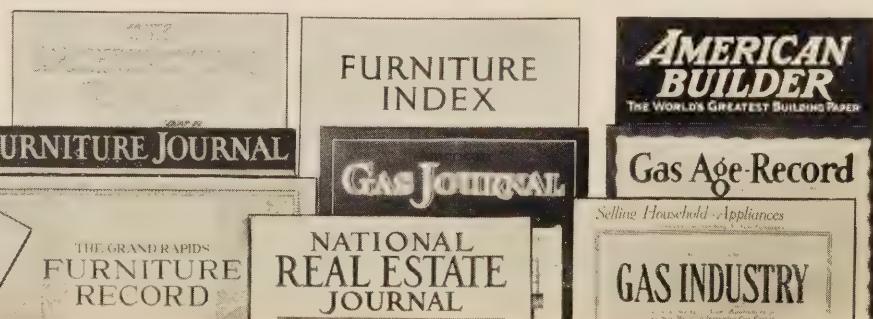
Since that time, week in and week out, month in and month out, Lorain has been advertised in the leading national publications so that as a result Today there is hardly a housewife that has not heard something about the famous Lorain Oven Heat Regulator — the one with the Red Wheel. In the magazines shown on this page appear yearly 90,000,000 advertisements dealing with Lorain.

Today, these Lorain advertisements are attracting the attention of the better class of women the world over, making them justly dissatisfied with obsolete and inefficient cooking-appliances and creating a big demand for the finest types of gas ranges manufactured.

At the present time practically every woman's magazine includes accurate measurements of "Time and Temperature" in its authoritative recipes. So that the owner of a Lorain-equipped Gas Range finds an ever-increasing supply of authentic Time and Temperature recipe-material from which to choose.

The Lorain Oven Heat Regulator has been approved by every recognized test-kitchen in America, including Good Housekeeping Institute, Priscilla Proving Plant, New York Tribune Institute, Modern School of Cookery and the Testing House of Today's Housewife.

Lorain-equipped Gas Ranges have been on the market for eleven years and are being used in more homes, schools, churches, hospitals, testing kitchens, and fraternal organization structures than all other makes of heat-regulated gas ranges combined. The Lorain Oven Heat Regulator is unconditionally guaranteed by American Stove Company, the World's largest manufacturer of gas ranges.



# This is the Architects' Authoritative Book of Specifications Which Recommends Lorain-equipped Gas Ranges



*Below is shown a reproduction of the half-page devoted to a description of Lorain-equipped Gas Ranges in The American Architect Specification Manual*

## American Stove Co.

National Stove Company Div.  
Lorain, Ohio  
George M. Clark & Co. Div.  
Chicago, Illinois  
Dangler Stove Co. Div.  
Cleveland, Ohio

New Process Stove Co. Div.  
Cleveland, Ohio  
Reliable Stove Co. Div.  
Cleveland, Ohio  
Quick Meal Stove Co. Div.  
St. Louis, Missouri

## Ranges—Gas Cooking

"LORAIN" Oven Heat Regulator  
Hot Plates  
Laundry Stoves  
Water Heaters  
Portable Ovens  
Gas Heaters

### GAS COOKING RANGES

- 1 All ranges and laundry stoves shall be (here state type, size of oven, whether glass panel door, etc.) right or left hand oven, artificial (what kind) or natural gas, open or solid cooking tops, with or without top lighter, as manufactured by the American Stove Co. (state Division, if a particular type is indicated).

### OVEN HEAT REGULATOR

- 2 All ovens shall be equipped with the "Lorain" oven heat regulator.

### INSTALLATION

- 3 Gas outlets will be provided by others as shown on drawings (or state within

two or more feet of each fixture, as the case may be). The ranges and laundry stoves shall be connected with pipe in accordance with the rules of the public service company interested. Service pipe to have valve next to flow to shut off gas when range is removed for repairs.

- 4 All fixtures shall be installed complete and ready for use. They shall be tested in every particular, as may be required by the (Owner or Architect).
- 5 Where range is connected to a flue, smoke-pipe of range is to have a damper therein to control down drafts.





File No.	
GAS RANGES	
with	
Lorain Oven Heat Regulator	
and Kitchens:	
Large	
Medium	
Small	
American Stove Co.,	Local Agent -----
829 Chouteau Ave.,	Address -----
St. Louis, Mo.	Telephone -----

AT  
3258  
AM 35  
1925

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